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Part describe the Semicircle *a b c d*. From *i k*, draw the Lines *i b*, *k c*, parallel to *b n* the central Line, cutting the Semicircle in *b* and *c*. Divide the Arches *a b* and *c d*, each into any same Number of Parts; suppose 4; and divide *b n* into the same Number of Parts also, as at the Points of *g f e*; through which draw right Lines at right Angles to *b n* of Length at Pleasure. From the 4 Divisions in the Arch *a b*, to those in the Arch *c d*, draw Ordinates (as those dotted.) Make the Diameter of the Shaft at *e*, equal to the Length of the first Ordinate; at *f*, to the Length of the second Ordinate; and at *g*, to the Length of the third Ordinate. Then from the Points *i k*, through the Extremes of the Diameters *g f e*, to the Points *a d*, trace the Contours, or Out-lines of the Shaft's Diminution.

*The Manner of Rusticating the Shafts of Columns explained.*

THE Shafts of the *Tuscan*, *Dorick*, and *Ionick* Columns, are sometimes rusticated; but those of the *Corinthian* and *Composite* seldom or ever.

**R U L E.** *To rusticate the Tuscan, Dorick, and Ionick Shafts.*

DIVIDE the Height of the *Tuscan* in 7, as in Plate I. the *Dorick* in 8, as in Plate X. and the *Ionick* in 9, as in Plate XXI; then the Blocks and Intervals in the *Tuscan* and *Ionick* will each be 1 Diameter, and those of the *Dorick* 2 Diameters.

THE Projection of the Blocks are generally made equal to the Projection of the Plinth, as expressed in the *Tuscan* Order, Plate I. and continued upright without Diminution; but as the upper Parts of the Shafts seem thereby overcharged, I therefore recommend the Diminution to be parallel with the Shaft, as in the *Dorick* Order, Plate X.

*The Manner of Fluting the Shafts of Columns explained.*

THE Shafts of the *Dorick*, *Ionick*, *Corinthian*, and *Composite* Columns, are sometimes fluted and cabled; but the Shaft of the *Tuscan* Column seldom or ever was, as being an Embellishment too gaudy for so robust and simple an Order, whose Beauty consists in its native Plainness; and indeed all Columns have a grander Aspect

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when entirely plain, than when rusticated or fluted. The *Dorick* Shaft, with respect to its *Herculean Aspect*, should not be fluted; but as the Ancients dispensed therewith, the Moderns frequently do the same. But however, as herein Majesty must be preserved, therefore the Ancients allowed but 20 Flutes, and those without Fillets, as in the Left-side of Plate XI. thereby making them of a masculine Aspect; whilst those of the *Ionick* and *Corinthian* Shafts are charged with 24 Flutes, and as many fillets (each of which are equal to one third of a Flute) which renders them less capacious and of an effeminate Aspect, agreeable to the Characters of those Orders.

R U L E. *To divide the Flutes of a Dorick Column.* Plate XI.

D I V I D E the Circumference into 20 equal Parts, and draw Lines, thereby making a Polygon of 20 Sides; on each Side compleat an equilateral spherical Triangle, as *a b c* on the Left of Plate XI. and on the external Angle, as *b*, describe the Curve *a c*, which is the Depth or Sinking in of a Flute.

R U L E. *To divide the Flutes and Fillets of an Ionick, Corinthian, or Composite Column.* Plate XXV.

D I V I D E the Circumference of the Semi-Column in 12 Parts, and each Part in 8, as *a b*. Give 3 Parts to each Semi-Flute, as *a b*, and *i b*; and two Parts to each Fillet, as *b i*.

T H E Sinkings or Depths of these Fillets are either the Arch of a Quadrant, as those on the Right-hand described on the Centers *c e*, &c. or of a Semi-circle, as those on the Left, described on the Centers *x x*, &c.

R U L E. *To describe Cablings, in the Flutes of a Column.* Plate XXV.

O N the Points *z z*, with the Radius *z x*, describe the Arches *y x o*, *y x o*, &c. which are the Bases of the Cablings, and whose Height finishes at the first third Part of the Shaft's Height.

R U L E. *To set out Flutes and Fillets on the Shaft of a Column.* Plate XXVI.

O N a Pannel, &c. draw a right Line, as *a b*, and thereon set off 24 equal

24 equal Parts at Pleasure, which together must always be less than the Girt at the Astragal of the Column to be fluted.

DIVIDE any 1 Part in 4 Parts, and take 1 Part in the Compasses, and set it off in every of the other 23 Parts; and from the several Parts so divided (which will be to one another as 1 to 3; that is, a Fillet to a Flute) draw up right Lines at right Ang'les from the divided Line. This done, strike a perpendicular Chalk-Line down the Front of the Column. And being provided with two straight-edged Pieces of Parchment, &c therewith girt the Column at its Base, and at its Astragal. Apply the Girts so taken to the parallel Lines aforesaid, so that their Extremes shall just touch the two outer Parallels, as at *e c* and *d f*. Then keeping them there, with a Pencil mark their Edges at the Meeting of each Parallel; and thereby the two Girts will be divided into the Flutes and Fillets, agreeable to your Column to be fluted. This done, apply any End of each of the Parchment Girts to the Bottom and the Top of the Front central Line; and then embracing the Column at its Base and Astragal, remove each Girt, until you bring the Middle of a Flute on the central Line; and then prick off the Breadth of every Flute and Fillet in the two Girts, which will stand exactly perpendicular over each other.

*Note.* In large Columns it may be necessary to set out the Breadths of the Flutes and Fillets, in one or more Places, between the first third Part of the Shaft's Height and the Astragal; which, when required, may be most exactly done, by girting at the Parts required, and proceeding afterwards in every other respect, as aforesaid.

*The Fluting of Pilasters explained.*

R U L E. *To flute a Pilaster with Fillets, and a Bead at each Quoin.* Plate XXXVII.

DRAW a Line at Pleasure, as *a b*, and thereon set 31 equal Parts, which together shall be greater than the Pilaster to be fluted. Take the 31 Parts in your Compasses, &c. and on the first and last Points make the Section *c*, and draw the Lines *c a* and *c b*, which will compleat an equilateral Triangle. Set the Breadth of the Pilaster

from *c* to *d*, and to *e*, and draw the Line *d e*, which being parallel to *a b*, is therefore equal to the Breadth of the Pilaster. Now right Lines drawn, from the 31 Parts, to the Point *c*, they will divide the Line *d e*, in similar 31 Parts also. Of which give the 2 outer Parts to the two Beads at the Quoins; the next 2 outer ones to the 2 outer Fillets; the next 3 to the Breadth of a Flute; the next 1 to a Fillet; the next 3 to a Flute; the next 1 to a Fillet, &c.

*Note.* By the same Rule a Pilaster with Flutes and Fillets only, as Fig A, is divided from 29 Parts, first set off at Pleasure; and then proceeding as before.

HAVING thus explained the Bases and Shafts of Columns, &c. I shall now proceed to their Capitals.

Of Capitals, there are two Kinds, *viz.* the one consisting of Mouldings only, as those of the *Tuscan* and *Dorick*; and the other of Mouldings and sculptured Ornaments, as the *Ionick*, *Corinthian*, and *Composite*.

#### *The Heights of Capitals explained.*

THE Height of the *Tuscan* and *Dorick* Capitals are each precisely a Semidiameter, as in Plates II. and XI. The Height of the ancient *Ionick* Capital, in its Mouldings above the Astragal of the Shaft, is but one third of a Diameter, or 20 Minutes; but including the Depth of its Volute, 'tis 35 Minutes, as in Plate XXIII. which exceeds the Volute to the modern Capital by 5 Minutes. The Height of the *Corinthian* Capital is one Diameter and one sixth, as also is the Height of the *Composite* Capital.

#### *The Divisions and Projections of the Members in the Tuscan and Dorick Capitals explained.* Plates II. and XI.

**R U L E I.** To divide the Heights, and determine the Projections of the Members in the Capital of a *Tuscan* Column or Pilaster.

##### *I. To divide the Heights of the Members.* Plate II.

Divide the Height in 3 Parts (as on the Left-side.) Divide the middle 1 in 6; of which give the lower to the Fillet under the Ovolo, and the other 5 to the Ovolo. Divide the upper 1 into 4; give the upper 1 to the Fillet, and the other 3 to the Fascia of the

the Abacus. Set down  $ab$ , half the Height of the Frize or Neck of the Capital, from  $b$  to  $c$ , and divide it in 3 Parts; give the upper 2 to the Astragal, and the lower 1 to its Fillet.

II. *To determine the Projections.*

DIVIDE the Semi-diameter of the Column at its Astragal (as is done above on the Capital) in 6 Parts, and give 3 to the Projection of the upper Fillet.

BUT if the Capital is of an undiminished Pilaster, (as on the Right-hand Side of Plate II.) then divide the Semi-diameter of the Pilaster (as above on the Capital) in 8 Parts, and give 3 to the Projection, as before.

*Note*, By the Scale of Projection, placed against the Neck of the Capital, you see that the whole Projection is divided in 3; the first 1, in 2; and the last 1, in  $\frac{1}{4}$ ; the half of the first 1 stops the Projection of the Fillets under the Astragal and Ovolo; and the 2 first of the 4, in the outer 1 third Part, stops the Ovolo and Fascia of the Abacus.

R U L E II. *To divide the Heights, and determine the Projections of the Members contained in the Capital of a Dorick Column or Pilaster.* Plate XI.

I. *To divide the Heights of the Members.*

DIVIDE the Height in 3 Parts (as on the Left-side.) Divide the middle 1 in 3; of which the lower 1 divided in 3, give the upper 2 to the Astragal, and the lower 1 to the Fillet. Divide the upper 3d Part in 3; give the lower 2 to the Fascia of the Abacus; and the upper 1 thereof divided in 3, give the upper 1 to the Fillet, and the lower 2 to the *Cima reversa*.

*Note*, THE Height of the Astragal to the Shaft is found, as before in the *Tuscan Column*, Page 11.

II. *To determine their Projections.*

DIVIDE the Semi-diameter of the Column at its Astragal (as above on the Capital) in 4; and give 2 to the Projection of the upper Fillet. But if the Capital is of an undiminished Pilaster, (as on the Right-hand Side) then divide the Semi-diameter of the

Pilaster (as above on the Capital) in 5 Parts, and give 2 to the Projection, as before.

By the Scales of Projection on each Side of the Capital, you see, that the whole Projection is there divided in 4 Parts; from which, and their Sub-divisions, the several Members in the two Varieties of Capitals have their Projections determined.

*The ancient Ionick Capital, and its Volute explained.* Plate XXIII.

R U L E I. To divide the Height of its Members, and describe its Volute.

I. *To divide the Height of its Members.*

DIVIDE the given Height as  $h x$ , in 11 Parts; give the upper 1 to the upper Fillet; the next 2 to the *Cima reversa*, which with the aforesaid Fillet makes the Abacus: give the next 1 to the List of the Volute; the next 3 to the Band of the Volute; and the remaining 4 to the Ovolo. This done, set down 8 of the above 11 Parts from  $x$  to 1; give the first 2 to the Astragal; the next 1 to its Fillet; and the lower 5 to the Depth of the Volute. Divide  $r s$  on the Right-hand (which is equal to  $h x$ , or 23 Minutes, the Height of the Mouldings of the Capital) in 4 Parts, and turn down 1 Part to  $d$ ; then  $r d$  will be equal to 20 Minutes, which is equal to the Semi-diameter of the Column at its Shaft. Now admitting  $b v$  to be the central Line of the Column, make  $v c$  equal to  $r d$ , and draw the Line  $c c b$ , which will be the Upright of the Column. Make  $b g$  equal to two thirds of  $a 1$ , the Height of the Astragal; and from the Point  $g$  draw the Cathetus or Line  $f g$ , parallel to the central Line. Divide  $g b$  in 4 Parts; the first 1 stops the Astragal at  $a$ . Make  $f n$  equal to  $f i$ , which will terminate the Projection of the Abacus.

R U L E II. *To describe the Ionick Volute.* Plate XXIII.

FROM 1 Part below  $x$ , draw the Line  $p m o$  for the central Line of the Astragal, intersecting the Cathetus  $i g$  in  $o$ . On the Point  $o$ , with the Radius  $o z$ , describe the Circle or Eye of the Volute (which is represented at large by the Figure R,) wherein inscribe the Geometrical Square, and draw its Diameters 2, 4; and 1, 3; divide each

each Semi-diameter in 3 Parts, as at the Points 6. 10; 5. 9; 12. 6; and 11. 7; which are the Centers numbered in Order, on which the Out-line of the Volute is described, *viz.* The Point 1 is the Center to the Arch *i m*; the Point 2, of the Arch *m g*; the Point 3, of the Arch *g p*, &c.

THE inward Line of the List of the Volute is described on 12 other Centers, which are at one fifth of the Distance between the other 12 Centers, and which are signified by the small Divisions next within the 12 Centers in the Eye of the Volute at large, in Plate XXII.

To gradually diminish the list of this Volute, we must divide its Height or Breadth in 12 Parts, as expressed above in Plate XXII. and at every Quarter of its Rotation abate its Breadth 1 of those Parts, as expressed by the numerical Figures affixed; which will cause it to terminate at the eye in a Point.

*Note.* FIG. AB, Plate XXIII. is a View of Half a Side of the Capital, wherein B shews the Thickness of the Volute, whose Height is equal to *i g* in the Front. The Heights of the other Parts are shewn by the Scale of Parts on the left; and is the same as the like Scale above.

*Note.* The Abacus to this Capital being square, is therefore called by Woikinen a *Trencher-Capital*; and indeed very properly, because the word *Abacus* is derived from the Greek Word *Abax*, signifying a square Trencher.

*The modern Ionick Capital explained.* Plate XXIV.

*RULE. To divide the Heights of the Members contained in its Abacus, and to determine their Projections*

THIS Capital, tho' call'd modern, was invented by VINCENT SCAMMOZZI; and, including its Volute, is precisely half a Diameter in Height.

I. *To find the Heights of the Members.*

DIVIDE its Height in 3 Parts, and the upper half of the upper 1 in 4, as on the left; of which give the upper 3 to the Ovolo, and the other one to the Fillet under it. Divide the lower 2 Parts

and half in 8 parts (as on the Right) give the upper 1 and half to the Fascia of the Abacus; the next half to the Recess under the Abacus; the next 2 to the Ovolo; the next 1 to the Astragal; and, next half to its Fillet.

II. *To find the Projections of the Members.*

DRAW the central Line of the Column  $b\ g$ ; and in any Place, as at  $g$ , draw the Line  $a\ b$  at right Angles to  $b\ g$ , and of Length at Pleasure. Make  $g\ c$  and  $g\ d$ , each equal to the Semi-diameter  $i\ k$ ; and divide it into 12 Parts, each representing 5 Minutes (or one 12th of a Diameter;) make  $c\ a$  and  $d\ b$ , each equal to 15 Minutes, or one fourth of a Diameter, which terminates the Projection of the extreme Parts or returned Horns of the Abacus; as exhibited by the dotted parallel Lines drawn thence up to them.

AND from the Subdivisions of the 2 outer 5 Minutes, the Projections of the other Parts of the Abacus are determined in the same Manner; as also are the Projections of the Ovolo, Astragal, and Fillet, represented by dotted Lines within the Volute.

THE Volute of this Capital is represented in Plate XXII. and is described the same as that of the ancient Capital; for though it appears to be elliptical when seen in a direct View, as being thereby something fore-shortened, yet 'tis circular, as the other.

UNDER this Capital I have placed half its Plan; whose Construction being plainly exhibited by the dotted perpendicular Lines, proceeding from the Members in the Elevation, needs no further Explanation.

*The Corinthian Capital explained. Plate XLI.*

THIS Capital was originally adorned with the Acanthus Leaves only; but as some delight in Variety, I have therefore in Plate XL. given the Acanthus with the Olive, Laurel and Parsley, to be employed at Discretion.

THE Height of this Capital was originally but 1 Diameter; but modern Architects thinking it too short, they therefore added 10 Minutes, thereby making its Height 70 Minutes, and giving it a much more magnificent Aspect than it had before.

By the Measures affixed, which is no more than the Height divided in 7 Parts, of which the upper one is the Abacus, the Height of every Part is adjusted; and by the Plan and Elevation in Plate XLII. the Breadths and Distances of the Leaves, &c. are fully exemplified in the like Manner.

IN the Drawing of this Capital, the young student must first accustom himself to express only the Leaves in Gross, as expressed in this and the XLIVth Plate, until he has made himself a Master of forming their Out-lines; when it will be a pleasure to raffle them, as expressed in Plate XLIII. and XLV.

AND as the Capital of a Pilaster has all its Leaves in each Face in a direct View, contrary to those of a Capital to a Column, and is one sixth of a Diameter more in Breadth; I have therefore, to explain the Difference and Parts, shewn in Plate XLIV. the Plan and Elevation of a Capital to a Pilaster, in the same Manner as that of a Column in Plate XLII. as indeed I have also the Elevation of a half Capital at large, with its Leaves raffled, as those of Plate XLIII.

#### *The Composite Capital explained. Plate LVIII.*

THIS Order is called *Composite*, because its Capital is composed of the *Ionick* and *Corinthian* Capitals; that is, its Abacus, Voluts, Ovolo, and Astragal between them, are the very Members which form the modern *Ionick* Capital. Its two Heights of Leaves are the very same as those in the *Corinthian* Capital; and its Stalks, which in the *Corinthian* Capital finish with Voluts and Helices, are here stopt by the *Ionick* Voluts, and made to finish inwardly with Husks on Tendrels, called Caulicoles.

THE Height of this Capital is the same as that of the *Corinthian*, and is divided in 7 Parts also, of which the upper 1 is the Height of the Abacus; and which being divided in 2, and the upper 1 in 5, the upper 4 is the Height of the Ovolo, and the lower 2 of the Fillet. Divide the lower Half of the Height of the Abacus with the next two Parts into 1, and then finish the Volute exactly the same, as in the modern *Ionick* Capital, Plate XXIV.

Now,

Now, as the remaining Part of this Capital is entirely *Corinthian* as before proved, 'tis needless to say more thereof; but that it may be fully exemplified, I have therefore shewn its Elevation at large in Plates LIX. and LX. as well for a Pilaster, as for a Column; as I have done before in the *Corinthian* Order.

#### C H A P. IV. Of Entablatures.

**A**N Entablature is the uppermost or last principal Part of an Order, (which *Vitruvius* called *Ornament*) and consists of 3 Parts *viz.* an Architrave, a Freeze or *Frize*, and a *Cornice*.

THE Heights of Entablatures being declared in Chap. I. we are now to observe that their Projections are equal to their Heights, in all the Orders, excepting the *Dorick*, and that only but when its Mutules are introduced; when it then consists of half the Entablature's whole Height.

THE Heights of the several Entablatures are thus divided into their Architraves, Fries, Cornices, &c.

**R U L E I.** To divide the Tuscan Entablature into its Architrave, Frize, Cornice, &c. Plate III.

*First*, DIVIDE the given Height into 7 Parts; give 2 to the Architrave, 2 to the Frize, and 3 to the Cornice.

*Secondly*, DIVIDE the Height of the Architrave in 7 Parts; give 2 to the lower *Fascia*, 4 to the upper *Fascia*, and 1 to the *Tenia*, whose Projection is equal to its Height; and which being divided in 3, give 1 to the Projection of the upper *Fascia*.

*Thirdly*, DIVIDE the Height of the Cornice in 3; divide the upper 1 in 4, and give the upper 1 Part to the *Regula*, and the other 3 to the *Cima recta*. Divide the middle 1 in 6; give the upper 1 to the *Fillet*, and the other 5 to the *Corona*. Divide the lower 1 in 2; give the upper 1 to the *Ovolo*; and the lower half divided in 4, give the upper 1 to the *Fillet*, and the other 3 to the *Cavetto*.

By the Scale of Projection is seen, that the Projection of the *Corona* is two thirds; the *Ovolo*, one third; and the *Fillet* of the *Cavetto*, one sixth of the whole.

*Note*,

Note, By well understanding the Manner of proportioning this Entablature, (which is very easy) the others following will become as easy: But that the young Student may not be at any Stand therein, I will, for a further Explanation, explain the Entablatures of the *Dorick* and *Ionic* Orders in the same Manner.

R U L E II. *To divide the Dorick Entablature into its Architrave, Frize, Cornice, &c.* Plate XII.

*First,* DIVIDE the Height in 8 Parts; give 2 to the Architrave, 3 to the Frize, and 3 to the Cornice.

*Secondly,* DIVIDE the upper 1 of the Architrave into 3, and give the upper 1 to the Tenia: Divide the lower 2 in 6; give the upper 1 to the Fillet over the Gutta's, and the next three to the Gutta's.

DIVIDE the lower third Part of the Height of the Cornice in 3, and give the lower 1 to the Cap of the Triglyph. Divide the remaining Part of the Cornice's Height in 4 Parts, and the upper 1 Part in 4; of which give the upper 1 to the Regula, or upper Fillet on the *Cima recta*; and the lower 3 to the *Cima recta*. The next Part divided in 3, half the upper 1 is the Fillet; and the Remainder the Corona. The next Part being also divided in 3, the Upper 1 is the Capping of the Mutule, and the lower 2 the Mutule. Lastly, the lower 4th Part divided in 3, the upper 1 is the Depth of the Ground to the Mutules; and half the lower 1 is the Fillet to the Ovolo of the Bed-mould.

THE Projection of this Cornice (as before observed) is half the Height of the whole Entablature; and which being divided in 4, as on the *Cima recta*, has the Projections of its Members determined, as by Inspection is shewn.

Now 'tis to be noted, That the Breadth of a Triglyph is always equal to half the Columns Diameter at its Base; that its Channelings and Gutta's are found by dividing the Breadth of the Triglyph into 12 Parts, as exhibited at large in Plate XIII. That the Distances between the Triglyphs must always be equal to the Height of the Frize, and therefore will become exactly square. That these Intervals or Squares are called Metopes; and are sometimes enriched with

with Roses, as here expressed, or otherwise at the Pleasure of the Architect; and that the Manner of forming the Planceer of this Cornice is shewn in Plate XIV.

R U L E III. *To divide the Ionick Entablatures into the Architrave, Frize, Cornice, &c.*

As this Order has two Varieties of Entablatures, *viz.* the one with Dentules, and the other with Modillions; I have therefore shewn them both, and by explaining of one, the other will be understood.

*To divide the Ionick Entablature with Dentules.* Plate XXVIII.

*First,* D I V I D E the Height in 10 Parts, give 3 to the Architrave, 3 to the Frize, and 4 to the Cornice.

*Secondly,* D I V I D E the upper 1 Part of the Architrave in 4; give the upper 1 to the Fillet; the next 2, and 1 fourth of the lower 1, to the *Cima reversa*; and the remaining 3 fourths of the lower 1 to the Bead. These Members together are called the *Tenia* of the Architrave, whose Fillet's Projection is equal to their whole Heights.

*Thirdly,* As the Frize of this Order is made swelling, therefore divide the Height in 4, and on the middle 2 make the Section x, on which describe the Curve of the Frize.

*Fourthly,* T H E Height of the Cornice being in 4 Parts, divide the upper 1 in 4; give the upper 1 to the Regula or Fillet on the *Cima recta*, and the remaining 2, with 2 thirds of the lower 1, to the *Cima recta*; and the 1 third give to the Fillet on the *Cima reversa*.

D I V I D E the next Part in 4; give the upper 1 to the *Cima recta*, and the other 3 to the Corona.

D I V I D E the next or 3d part in 6; give the upper 3 to the Ovolo, the next 1 to its Fillet, and the next 1 to the Fillet between the Dentules.

D I V I D E the lower 1 in 3; the upper 1 will terminate the depth of the Dentules. Divide the middle 1 in 3, and the upper 1 will be the Depth of the Denticule or Fascia, on which the Dentules

are fixed, and the remains will be the *Cima reversa*, and lower Member of the Entablature.

THE Projection is divided into 4 principal Parts, as by the Scale against the Frize is shewn, by which its Members are terminated, as by inspection is plain,

*To divide the Ionick Dentules.*

IN an Entablature over a Column, divide the Distance between the central Line, and the Upright of the Shaft at its Neck, into 10 Parts; give 2 Parts to the Breadth of a Dentule, and 1 to an Interval. But in an Entablature over an undiminished Pilaster, divide the aforesaid Distance into 12 Parts, and proceed as before.

*Note*, THE Breadth of a Dentule is 5 Minutes, and of an Interval 2 Minutes and a half, which are described at large in Plate XXX.

Now, as the *Ionick* Entablature with Modillions, as expressed in Plate XXIX. has its Members proportioned in like Manner, I therefore need only to note, That the Breadth of each Modillion is 10 Minutes; that the Distance or Interval between them is 25 Minutes in an Entablature to a Column, and 30 Minutes in an Entablature to an undiminished Pilaster. And that the Curve of the Sophet of the *Ionick* Modillion is described at large in Plate XXX. as following.

*The Height and Projecture being before found,*

DIVIDE the Length in 6 Parts; and on the Point 5 errect the Perpendicular 5 *a* equal to 2 Parts and a half; also from the Point 2, let fall the Perpendicular 2 *b*, equal to 1 Part and a half, and draw the Line *ab*. On the Point 2, describe the Arch 1 *d*; on the Point *b*, the Arch *dc*; and on the Point *a* the Arch *c* 5.

*Note*, THE Manner of forming the Return of the Planceer of this Cornice is shewn in Plate XXXI.

RULE III. *To divide the Corinthian Entablature into its Architrave, Frize, and Cornice.* Plate XLVI.

1. DIVIDE the Height into 10 Parts; give 3 to the Architrave, 3 to the Frize, and 4 to the Cornice.

2. DIVIDE the Height of the Architrave, and of the Cornice, each in 5 Parts, and subdivide them, as exhibited; and then proceed in every Respect as in the preceding Orders.

*Note*,

*Note, THAT tho' the Dentules are expressed in this Cornice, yet they are not always used.*

*THAT the Breadth of the Modillions are 10 Minutes, as before in the Ionick, but their Distances are greater.*

*The Interval between Modillions in a Cornice over Columns is 25 Minutes; and in a Cornice over undiminished Pilasters, 30 Minutes.*

To render the Parts of this Modillion plain and intelligible, I have shewn it at large in Front and Profile, with its Measures, in Pl. XLVII. wherein Fig. A represents the Eye of its Volute at large, with the Centers numbered; on which its Curves are described in the very same Manner, as the Volute of the Ionick Capital.

BETWEEN the Modillions the Planceer of the Sophete of the Corona is enriched with Roses in hollow Pannels, called Coffers, as expressed in Plate XLVIII. which also shews the Manner of returning the Sophete at an external Angle.

R U L E IV. *To divide the Composite Entablature into its Architrave, Frize, and Cornice.* Plate XLI.

*First, DIVIDE the Height into 10 Parts; give 3 to the Architrave, 3 to the Frize, and 4 to the Cornice.*

*Secondly, DIVIDE the Heights of the Architrave, and of the Cornice, each into 4; subdivide their Parts, draw in and terminate their Members by the Scale of Projection, as before done in the preceding Orders. The Manner of enriching the Planceer of the Corona of this Cornice, and returning it at an external Angle, is exhibited in Plate LXII.*

C H A P. V. *Of Doors, Windows, Porticos, Arcades, and the Intercolumniation of Columns in general.*

**T**HAT the Young Student may have Pleasure in the Process of his Study, I have given him an Example of a Door square and circular-headed, with circular and pitched Pediments, a Window, a Portico, and an Arcade, with their Imposts and Architraves, in each of the first 4 Orders; which immediately follow their respective

pective Entablatures; and which having their principal Parts determined by their Measures affixed, need no other Explanation. And in order to further enable him in the Art of Designing, I have shewn the proper Intercolumniations, or just Distances, that the Columns of every Order must be placed in from each other, when employed in Colonades, &c. by which he may form new Designs at his Pleasure. See Plates VI, XVII, XXXIV, XXXV, and LIII.

CHAP. VI. *Of Pediments, and the Manner of finding their Raking and Returned Mouldings for their Cornices, and for Capping of their Raking Mutules and Modillions.*

PEDIMENTS, which the French call *Frontons*, from the *Latin Frons*, the Forehead, are commonly placed over Windows, Doors, Portico's, &c. to carry off the Rains, and to enrich the Order on which they are placed.

PEDIMENTS are either entire or open; and those are straight, circular, compound, &c.

An entire straight Pediment is generally called a pitched Pediment, as the lower Pediment in Plate LXIX. And an entire circular Pediment is generally called a Compass Pediment, as the upper Pediment in Plate LXIX.

WHEN a Pediment consists of more than one Arch, as those in Plates LXXI, and LXXII, they are called entire compound Pediments.

OPEN Pediments are those, whose raking Members are stopt in some certain Place between the Points of their Spring, and their Fas-tigium or vertical Point; as those in Plate LXIII, the lower Pediment in Plate LXXI, and the upper in Plate LXXIV.

ENTIRE Pediments are the first Kind that were made, and were originally placed to Portico's at the Entrances into Temples; but now we place them to Frontispieces of Doors, Windows, &c. for Ornament and Use.

As the entire Pediment by its reclining Surfaces carries off and discharges the Rains at its Extremes, therefore none but entire Pediments

ments should be employed abroad ; whilst the broken or open are employed for Ornament only within-side, where no Rains can come.

It is true we may daily see open Pediments placed without-side, as is done by *Indigo Jones* at *Shaftsbury House* in *Aldersgate-street, London*. But, surely, nothing can be so absurd, (unless it is the placing of an entire Pediment within-side a Building, where no Rains can fall ; as done by *Mr. Gibbs* within the *Church of St. Mary le Strand*) because, by their being open, they receive the Rains, and discharge them in Front, as a straight and level Cornice doth ; and therefore of no more Use.

As Pediments, when well applied, are very great Enrichments to buildings, and in many Cases are very useful, I have therefore given 14 Varieties for the young Student's Practice, with their Measures affixed ; by which they may be drawn and worked of any Magnitude required. *Vide Plates LXIX, &c.*

In the Working of Pediments, the chief Difficulty is, to form the Curves of the Raking and Returned Cornices, that shall exactly accader, or meet at their Mitres ; which may be truly worked, as following.

**R U L E.** *To describe the Curve of the Raking Cima recta of a Pediment, having the Curve of the straight or level Cornice given.*

Plate LXV.

LET *a b g* be the given *Cima recta* ; divide its Curve in 4 equal Parts at the Points *d e f* ; and draw the Ordinates *i f, k e, and also g d* ; from the Points *d e f*, draw the raking Lines *f q, e r, d x* ; and the perpendicular Lines *d k, e l, f m*. In any Place, as at *n o*, draw a right Line at right Angles to the raking Lines ; and making the Ordinates in Fig. B, as *w q, n r, t s*, equal to the Ordinates *i f, k e, g d*, in Fig. A, through the points *q r s*, trace the Curve *p q r s n* ; which is the Curve of the Raking *Cima recta* required. And tho', strictly speaking, each half is a Part of an Ellipsis ; yet, if Centers be found that shall describe the Arch of a Circle to pass through the three points *p q r*, and *r s n*, it will not be in the Power of the most inquisitive Eye to discover the Difference.

*To describe the Curve of the Returned Cornice.*

FR OM  $p$ . Fig. C, set back  $p o$ , the Projection  $b g$  in Fig. A; and draw the Perpendicular  $o n$ , on the Top of the Fillet  $p o$ ; make the Distances  $p t, t v, v w$ , equal to the Distances  $b k, k l, l m$ , in Fig. A; and drawing the Lines  $w x, v r, t g$ , parallel to the Perpendicular  $o n$ , they will cut the Raking Lines in the Points  $q r s x$ . From the Point  $p$ , thro' the said Points to  $n$ , trace the Curve  $p q r s x$ , which is the Curve of the Returned *Cima reſta*, as required; for its Ordinates at those Points are equal to the Ordinates in Fig. A.

By the same Rule, the Curves of the Raking and Returned Ovolo's, Plate LXVI, the Raking and Returned Cavetto's, Plate LXVII; and the Raking and Returned *Cima reverſa*, for the Capping of Raking Mutules and Modillions, Plate LXVIII, are found, as is evident to the first View.

**C H A P. VII.** *Of Block and Cantaliver Cornices, Rustick Quoins. Cornices and Coves, proportioned to Rooms of any Height, Angle-Brackets, Mouldings for Tabernacle-Frames, Pannels and Centering for Groins.*

I. **O**F Block Cornices I have given three Varieties in Plate LXXV; where I have first shewn them in small, to express the Breadth of their Block-Trusses, and Distance at which they are to stand; as likewise the Manner of applying them over Rustick Quoins; and secondly, at large, the better to express the Division of their Members.

II. IN Plate LXXIX, I have given an Example of a Cantaliver Cornice at large, which in lofty Rooms under a Cove has a very grand and noble Effect. The Breadth of a Cantaliver is one 4th of its Height, which is equal to the Height of the Frize; and the Distance they are placed at is the same as their Height; thereby making their Metopes exactly a geometrical Square, as in the Dorick Order.

III. Covēs to Cielings are of various Heights; as one third, one fourth, one fifth, one sixth, two sevenths, two ninths, &c. of the whole Height.

A COVE of one third, at Fig. A, Plate LXXXI, is best for a lofty Room ; and when Windows are made therein, the Groins make a very agreeable Figure, and take off the seeming Heaviness which an entire Cove of a large Height imposes on the Eye.

THE Curve of this Cove  $x\,b$  is a Quadrant of a Circle described on the Center  $e$  ; as also is the Curve  $a\,c$  of the same Radius described on the Center  $b$ . To find the Center  $b$ , after having set out the Distances of the Columns at 9 Diameters and a half, and described the Cove  $x\,b$ , as aforesaid, make  $d\,b$  equal to  $a\,d$ .

A COVE of one fourth, as Fig. A, Plate LXXIX ; is also fit for a lofty Room, as a Hall, Salon, &c. which is thus proportioned : Divide the Height in 20 Parts ; give 5 to the Cove, and 2 to the Entablature.

To describe an Angle-Bracket for any Cove, suppose for Fig. B.

LET  $a\,b\,c$  be a Front-Bracket, and  $a\,f$  the Base over which the Angle-Bracket is to stand. In C draw Ordinates from its Curve to its Base  $a\,n$ , at any Distances, and continue them till they meet  $a\,f$  the Base of the Angle-Bracket, from whence raise Ordinates at right Angles to the said Base ; and making them respectively equal to those in Figure C, through their Extremes trace the Curve  $a\,n\,e$ , which is one Quarter of an Ellipsis, and the Curve of the Angle-Bracket required.

A COVE of one 5th, as Fig. I, Plate LXXIX, is fit for a Room of State, and thus proportioned, viz. Divide the Height in 5 : give 1 to the Cove, and one third of the next to the Cornice, which is Dorick without Mutules, and represented at large by Fig. H.

A COVE of one 6th, as the two Coves in Plate LXXX, is fit for Dining-Rooms, &c. and is thus proportioned : Divide the Height in 30 Parts ; give 5 to the Cove, and 1 to the Cornice.

A COVE of two 7ths, as Fig. B, Plate LXXXI, is fit for a Study or Bed-chamber, and even for a Hall ; as herein expressed, and is thus proportioned : Divide the Height in 7 ; give 2 to the Cove, and 1 to the Entablature, which is Dorick.

IV. IN Plate LXXVI, I have shewn how to proportion the *Tuscan*, *Dorick*, *Ionick*, &c. Cornices to the Height of any Room; a Work known, or at least practised but by few,

I. *To proportion the Tuscan Cornice to a Room of any Height.*

DIVIDE the Height from the Floor or Dado in 5, and the upper 1 in 5; of which give 3 to the Height of the Cornice, and 2 to the Breadth of its Stile and Height of its Rail, Fig. A.

II. *To proportion the Dorick Cornice to a Room of any Height,*  
Fig. B.

DIVIDE the Height in 4, and the upper 1 in 10; of which give 3 to the Height of the Cornice, and 2 to the Breadth of its Stile and Height of its Rail.

III. *To proportion the Ionick, Corinthian, or Composite Cornices to the Height of any Room, Fig. C.*

DIVIDE the Height in 3, and the upper 1 in 5; of which give the upper 1 to the Height of the Cornice, and 3 fifths of the next 1 to the Height of the Rail, and to the Breadth of the Stile.

V. IN Plate LXXVII, I have given eight different Mouldings for Pannels; and in Plate LXXVIII, four different Mouldings for Tabernacle-Frames, with proper Enrichments, and their Measures affixed; by which they may be drawn and worked, of any Magnitude required.

VI. IN Plate LXXXII, I have shewn the Manner of finding the Curves of the necessary Ribs for Groins, by one general Rule, as follows.

IN Fig. A, let  $a b c d$  be the Plan, and the Semi-circle  $a c b$  an End Rib, and  $c f$  its Height. Draw the Diagonal  $a d$ , as also the Ordinates 1 2 3 4, on the Semi-circle Rib, which continue till they meet the Diagonal, in the Points 5 6 7 8; from whence raise right Lines perpendicular to  $a d$ , respectively equal to the Ordinates 1 2 3 4; and then tracing the Curve thro' their Extremes, it will be the Curve for the Diagonal Rib, as required.

By the same Rule, the Ribs for all other Kinds of regular or irregular Groins are found, be their Plans what they will, and

their Arches semi-circular, semi-elliptical, or Scheme ; as is evident by Figures B C D E and F ; which a little inspection will make evident to the meanest Capacity.

C H A P. VIII. *Of Trussed Partitions, Trussed Girders, Naked Flooring, &c.*

I. **I**N Plate LXXXIII, are three Varieties of Trussed Partitions, of 40, 50, and 60 Feet Bearing, for Graineries, Ware-houses, &c. wherein great Weights ate laid ; of which the middle one is for two Stories Height.

II. In Plate LXXXIV, the Figures A B C represent three Varieties of trussed Girders ; which ought not to exceed 25 or 30 Feet in Length ; and Figure D is a Girder cut Camber, which, for Lengths from 15 to 20 Feet, will do without being trussed, as the preceding.

*The Scantlings of Girders should be*

	Feet.	Feet.	Inches.
Lengths from	{ 12	{ 15	{ 8
	15	18	9
	18	21	10
	21	24	11
	24	27	12
	27	30	13

*Note, THAT Girders should have at least 9 Inches Bearing in the Walls, and be bedded on Lintels, laid in Loam, with Arches turned over their Ends, that they may be renewed at any Time without Damage to the Pier.*

III. In the upper Part of this Plate, I have shewn three Bays of Joists, or naked Flooring ; wherein the two outer ones have only their binding Joists expressed ; and that in the Middle with their Bridging Joists, (or Furring Joists) as called by some. In this kind of Flooring 'tis to be noted, that binding Joists are so framed as that

their

their under Surface be level with the under Surface of the Girder, and the upper Surface of their Bridgings with the under Surface of the Girder.

THE Distance of binding Joists should not exceed 3 Feet and a half, or 4 Feet, in the Clear; and their Scantlings should be as follows, *viz.*

	Feet.	Inches.
If their Length be	$\left\{ \begin{array}{l} 8 \\ 10 \\ 12 \end{array} \right\}$	their Scantlings should be $\left\{ \begin{array}{l} 6 \\ 7 \\ 8 \end{array} \right\}$ by $\left\{ \begin{array}{l} 5 \\ 5 \\ 5 \end{array} \right\}$ Inches.

BRIDGING Joists should be laid at 1 Foot in the Clear, and their Scantlings should be 3 by 4, 3 and a half by 4, or 4 by 4, &c.

IN common Flooring, where neither Binding nor Bridging Joists are used, the Scantlings of Joists ought to be as follows, *viz.*

	Feet.
If the Length be	$\left\{ \begin{array}{l} 10 \\ 11 \\ 12 \end{array} \right\}$ their Scantlings to be $\left\{ \begin{array}{l} 7 \\ 8 \\ 9 \end{array} \right\}$ by $\left\{ \begin{array}{l} 3 \\ 3 \\ 3 \end{array} \right\}$

*Note.* No Joists to exceed 12 Feet in Length; to have at least six Inches Bearing, and that on a Lintel or Bond Timber; and their Distance in the Clear not to exceed one Foot. 'Tis also to be observed, that all Joists on the Breasts and Backs of Chimneys be framed into Trimming Joists (whose Scantlings are to be the same as those of Binding Joists) at 6 or 8 Inches Distance behind, and 12, 16, &c; Inches before, as *α α.*

#### C H A P. IX. Of Roofs.

THE Requisites to Roofing, is the Scarfing and Completing of Raisings, or Wall-plates, &c. to determine the necessary Height of the Pitch, agreeable to the Covering; to find the Lengths of Principal and Hip-Rafters, and to back them when necessary; to

to contrive the proper Trusses for to strengthen the principal Rafters ; and to lay out in Ledgeinent the several Skirts ; thereby to determine the Quantity of Materials necessary ; and to find the several Angles and Lengths of all Parts ; so as to set out Work, and fix, at once, the Whole in a Workman-like Manner, and in the least Time.

Now, in order to make the young Student a Master, herein I have shewn,

1. IN Plate LXXXV, by Figures C D E F G H I K L M ten different Manners of Scarfing together the Raisings of Roofs ; which is the first Work to be done, and then the Beams being cogged down thereon at their proper Distances, which should never exceed 10 Feet in the Clear, we may begin to consider, and work the Superstructure to be raised thereon.

THE first Thing to be considered as the Height of the Pitch ; which must be determined according to the Covering ; which, if with plain Tile or Slate, the true Pitch, as Fig. A, will be proper : But if with Pan-tiles or Lead, it may be much lower. But here, for Example's Sake, we will suppose a Roof to be true Pitch, whose Plan is  $r v t b$ , Fig. B, and whose Breadth we will suppose is equal to  $g 4$ , Fig. A.

*To find the Length of a principal Rafter.*

Divide  $g 4$ , in 4 Parts ; on  $g$  and 4, with the Radius of 3 Parts make the Section  $b$  ; then draw the Lines  $g b$ , and  $b 4$  ; and each is the Length of a principal Rafter required.

*To find the Length of the Hip-Rafters.*

DRAW the Central Line  $o a$ , and the Diagonals or Bases, over which the Hip Rafters are to stand ; as  $r a$ ,  $t a$ ,  $a v$ , and  $a b$  ; make  $a t$ ,  $a b$ , and  $a r$ , in Fig. A, equal to  $a t$ ,  $a b$ , and  $a r$ , in Fig. B, and draw the Lines  $b t$ ,  $b b$ , and  $b r$  ; then  $b r$  is the Length of the Hip-Rafter  $r p$  ;  $b b$  is the Length of the Hip  $g b$  ; and  $q v$  and  $b t$  is the Length of the Hip  $t s$ .

Or otherwise, on the End of the Diagonal  $r a$ , raise the Perpendicular  $a q$  equal in height to  $b a$  in Fig. A, and draw the Line  $r p$ , which

which is the Length of that Hip, and equal to  $b_r$ , in Fig. A, as before. By the same Rule you may find the lengths of all the other three Hips

*To find the Angle of the Back of any Hip-Rafter.*

THROUGH any Point of its Base, as  $c$  in Fig. B, draw a right Line at right Angles, as  $f b$ , cutting the Out-lines of the Plan in  $f$  and  $b$ . From the Point  $c$ , let fall a Perpendicular, as  $c d$ , on the Hip  $g b$ ; and make  $c e$  equal to  $c d$ . Draw the Lines  $f e$ , and  $b e$ , and the Angle  $b e f$  is the Angle of the Back required.

*To lay out a Roof in Ledgement.* Plate LXXXVI.

LET  $b i d c$  be a given Plan;  $a b$ , Fig. B, the given Pitch; and  $b g, b e$ , a Pair of principal Rafters agreeable thereto.

By the preceding, draw the Ridge-Line  $a a$ , and the Diagonals  $a d, a c$ , and  $a b, a i$ . In Fig. B, make  $a c, a d$ , and  $a b$  equal to the Diagonals  $a a, a c$ , and  $a b, a i$ , in Fig. A. Thro' the Points  $a a$ , in Fig. A, draw the two beans  $q k$ , and  $e 4$ . Make  $r q$ , and  $f e$ , and  $k l, 4 m$ , each equal to the Length of a principal Rafter, as  $b g$ , Fig. B; and draw the Lines  $d s, s r, r b$ , and  $i l, l m, m c$ . On the Points  $B$  and  $i$ , in Fig. A, with the Radius  $b b$  (the Length of the Hip) make the Section  $t$ , and draw the Lines  $b t$  and  $t i$ .

On the Point  $d$ , in Fig. B, with the Length  $b d$ , in Fig. B, and on  $c$  with the Length  $b c$ , make the Section  $o$ ; then drawing the Lines  $d o$  and  $c o$ , the Skirts of the whole Roof are laid; which fill up with small and Jack Rafters at Pleasure.

Now, when the Skirts of a Roof are thus drawn on Paper, and are cut out round at their Extremes, and be truly bended or turned up on the Out-lines of the Raising, as  $b i, b d, d c$ , and  $c i$ ; they will all come truly together, and become a Model of the Roof required, wherein every Rafter may be expressed in its Place, and the just Lengths and Quantity known to a very great Exactness.

By the same Rule, the irregular Roof, Plate LXXXVII, is laid out in Ledgement, and its Requisites found, as is evident at the first view.

*Note,*

Note, As this Plan hath not parallel Sides, every Pair of Rafters will therefore be of different Lengths, although the Height of their Pitch is the same ; and so consequently every Rafter must be backed by taking away the Triangle ; as  $a e b$ , Fig. D, and then the Sole of the Foot of a Rafter will be as  $c a d b$ .

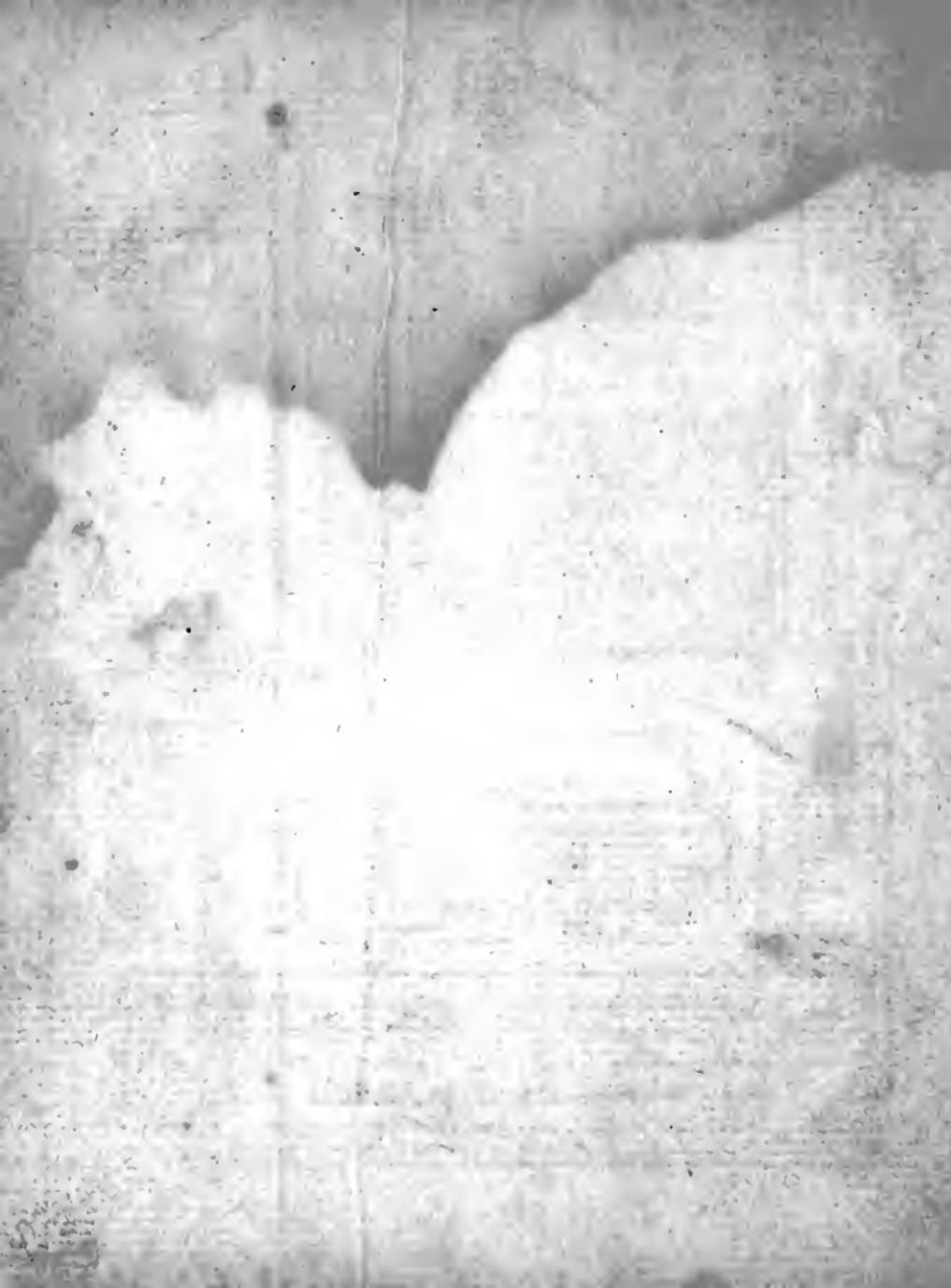
THE following Plates consisting wholly of Trusses for Roofs and Domes, need no Explanation more than their own Figures express, to which I refer.

F I N . I S.

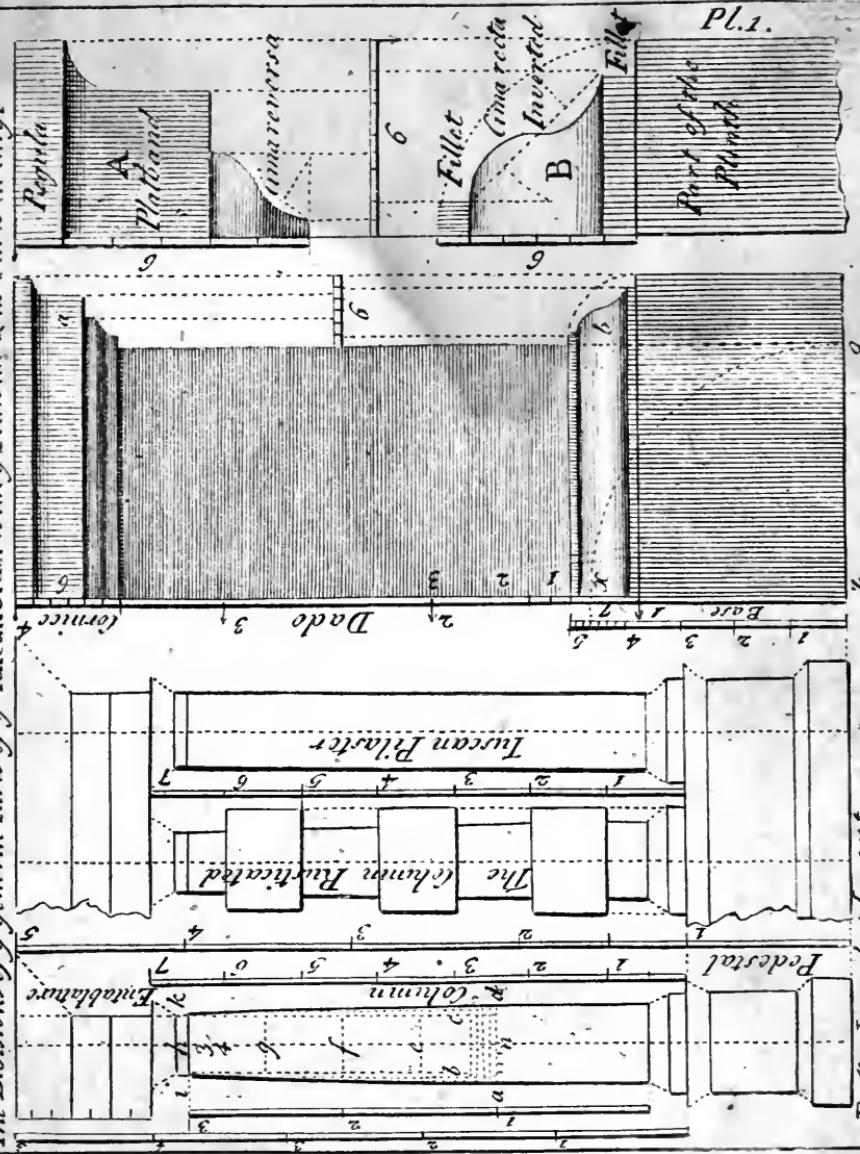
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December 8-1851 Salomon  
Massachusetts America

D. H. HILL LIBRARY  
North Carolina State College



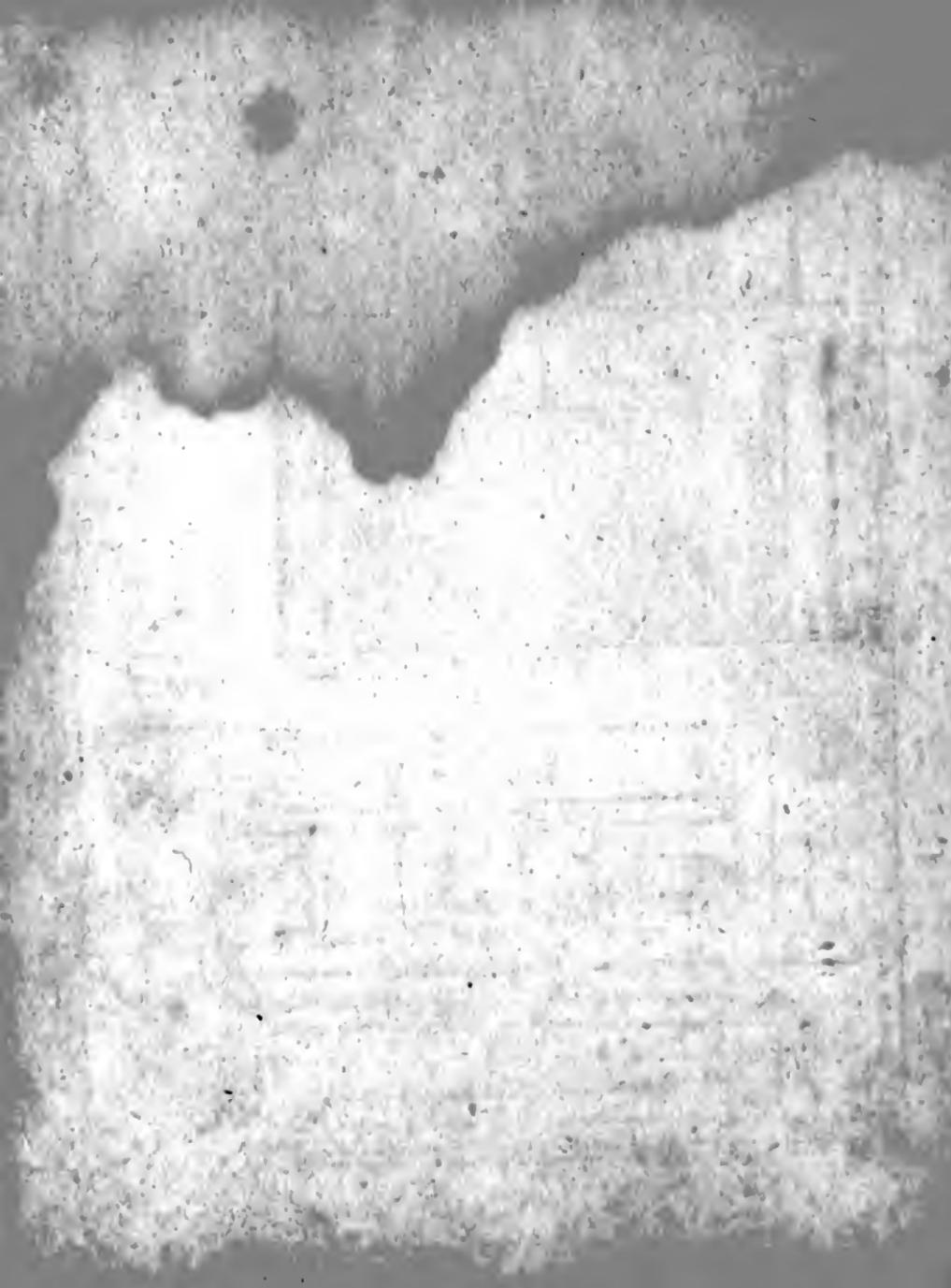


*The Divisions of y general chart of y Tuscan Order with y pedestal & its parts at large*



Bally Langley Invent

A





3

1

6

↑

8

3

Pl. II.

Fillet

Fascia

Ovolo

Fillet

Frize

Tuscan Capital

Collerino Fillet

1 2 3

Astroagal

a

b

c

To a Semi Column

Central Line

To a Semi Pilaster

Apophyses  
tincture

Torus

2

2

3

4

1

2

3

4

1

4

2

3

1 2 3 4

Plinth

Tuscan Base

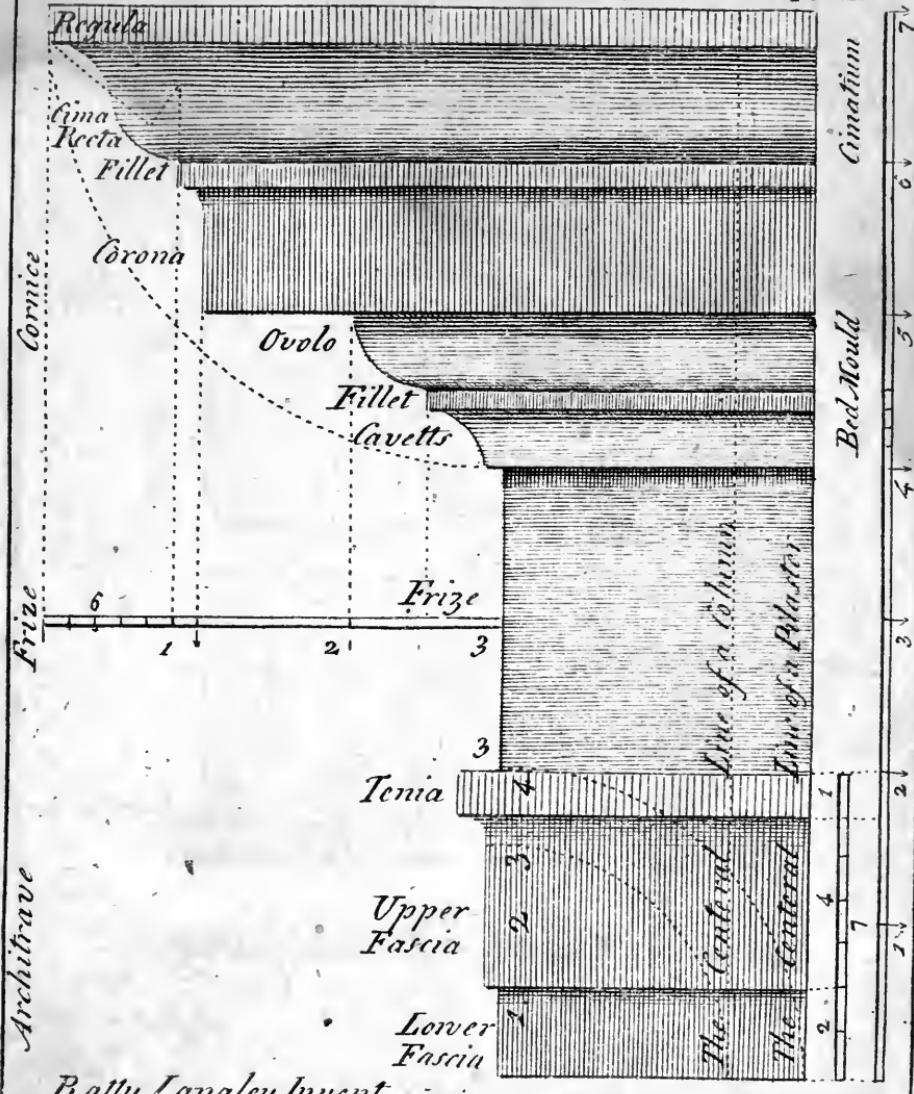
Bally Langley Inuent

2

3

## *The Tuscan Entablature*

Pl. III



*Batty Langley Invent*





Tuscan Doors

Plate. 4

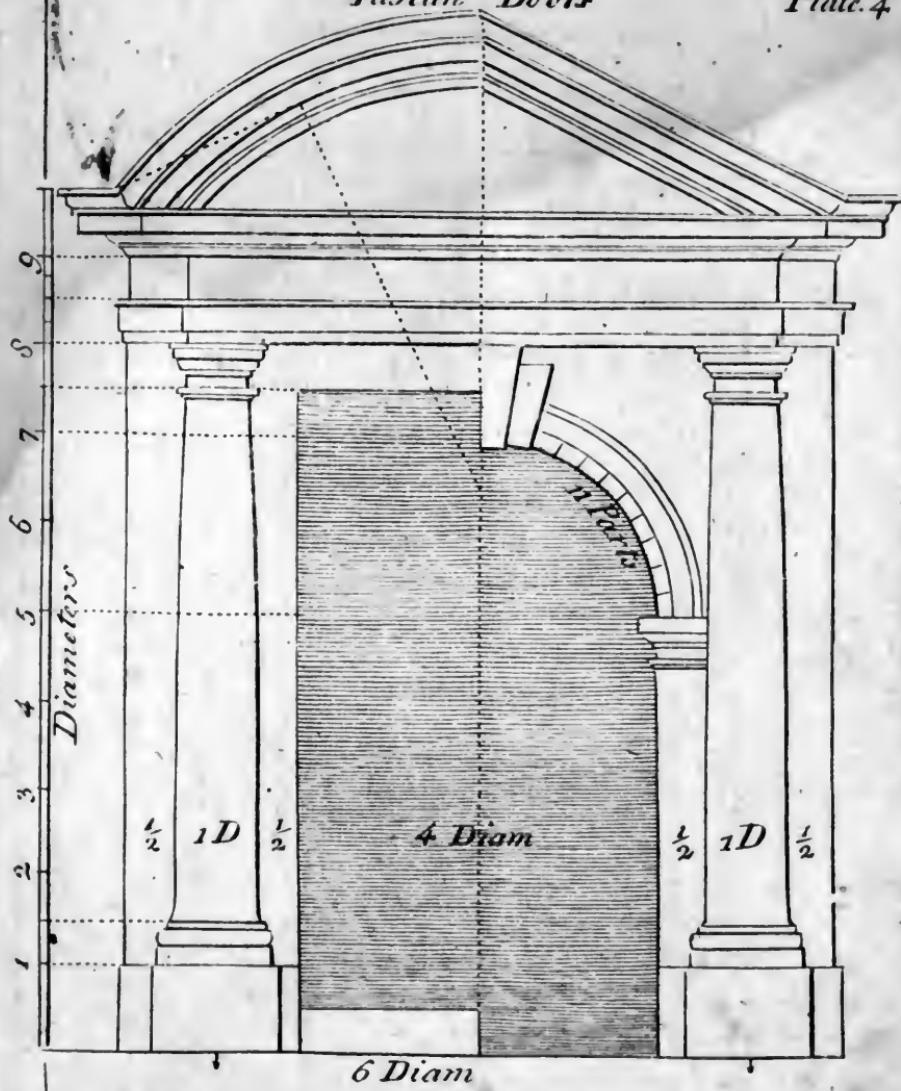
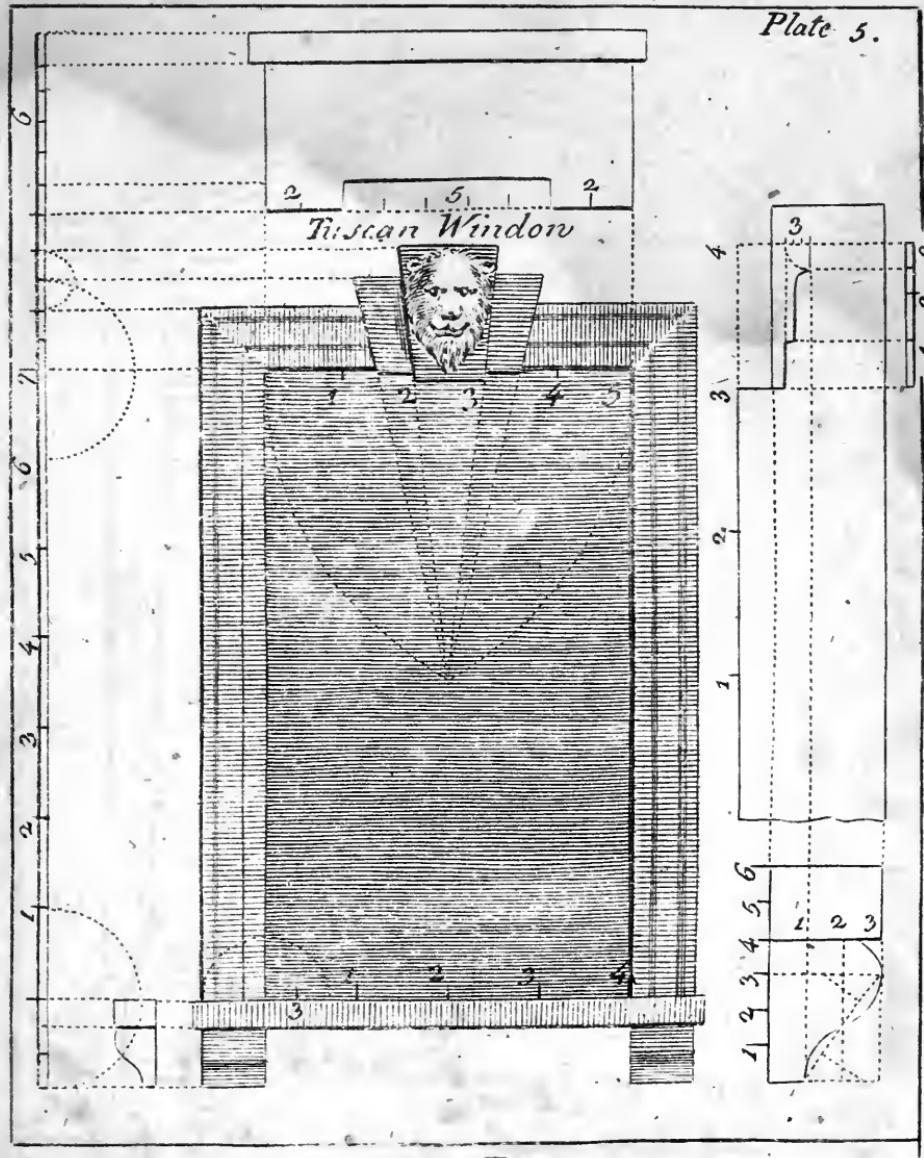
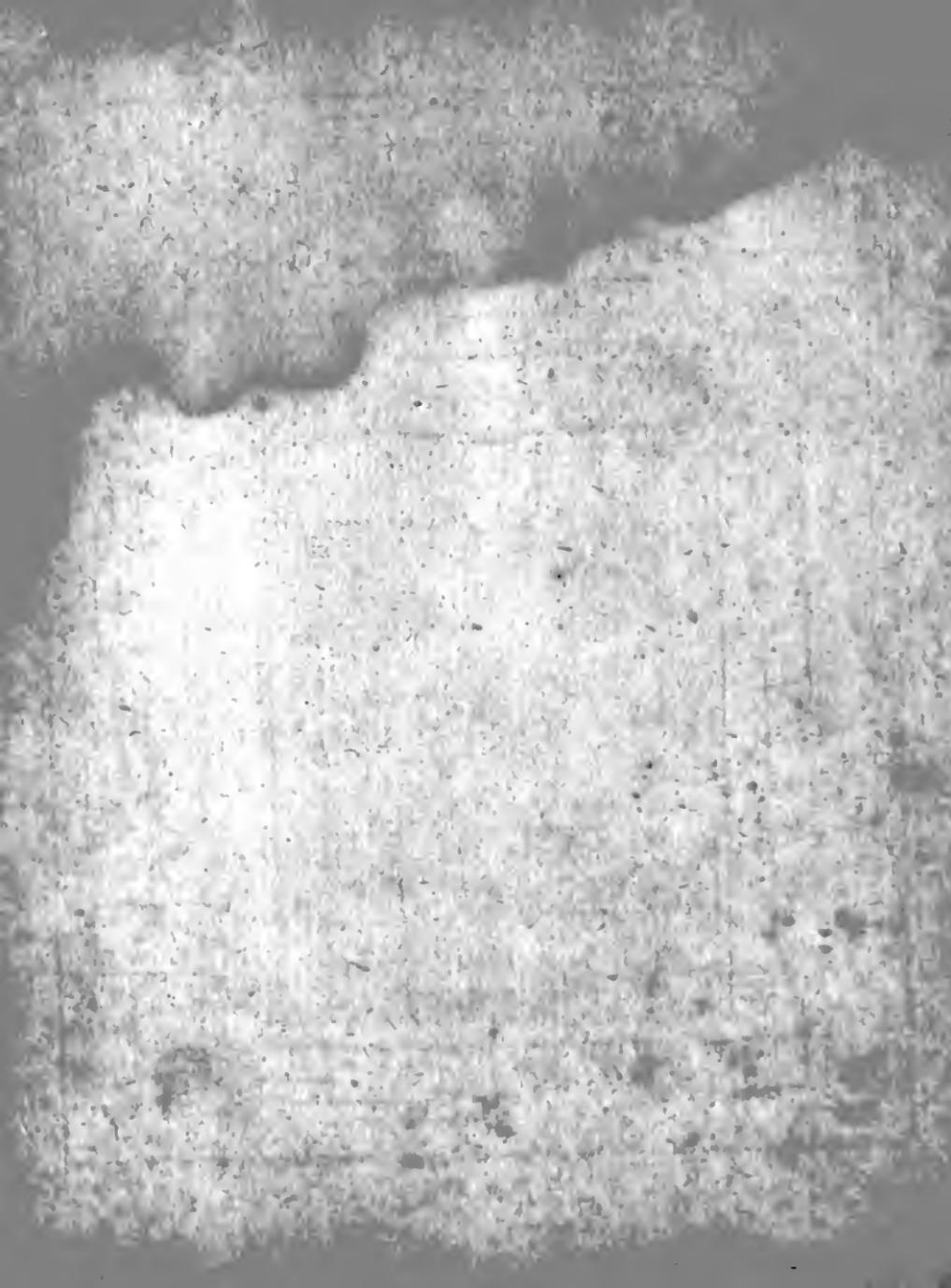
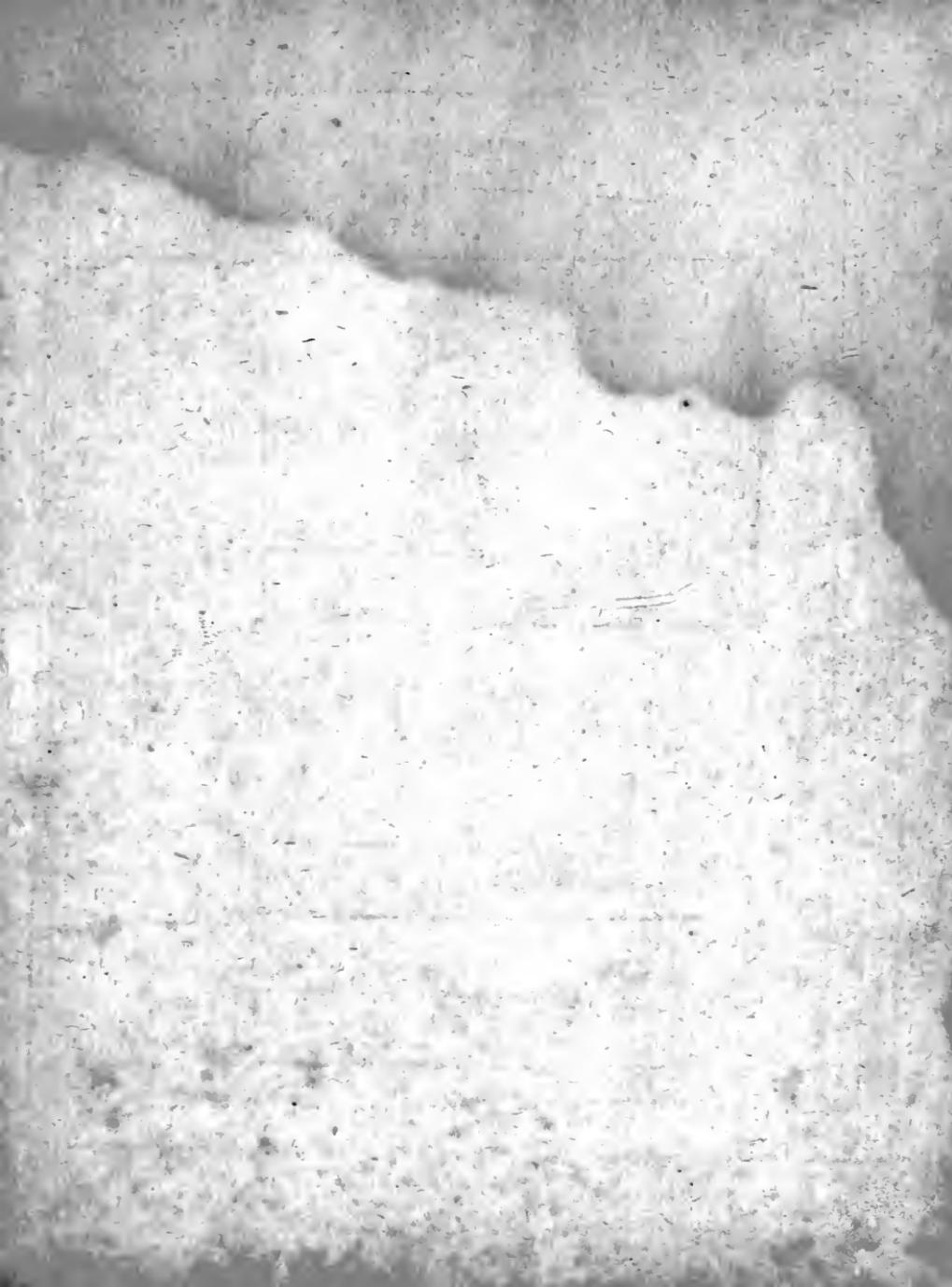


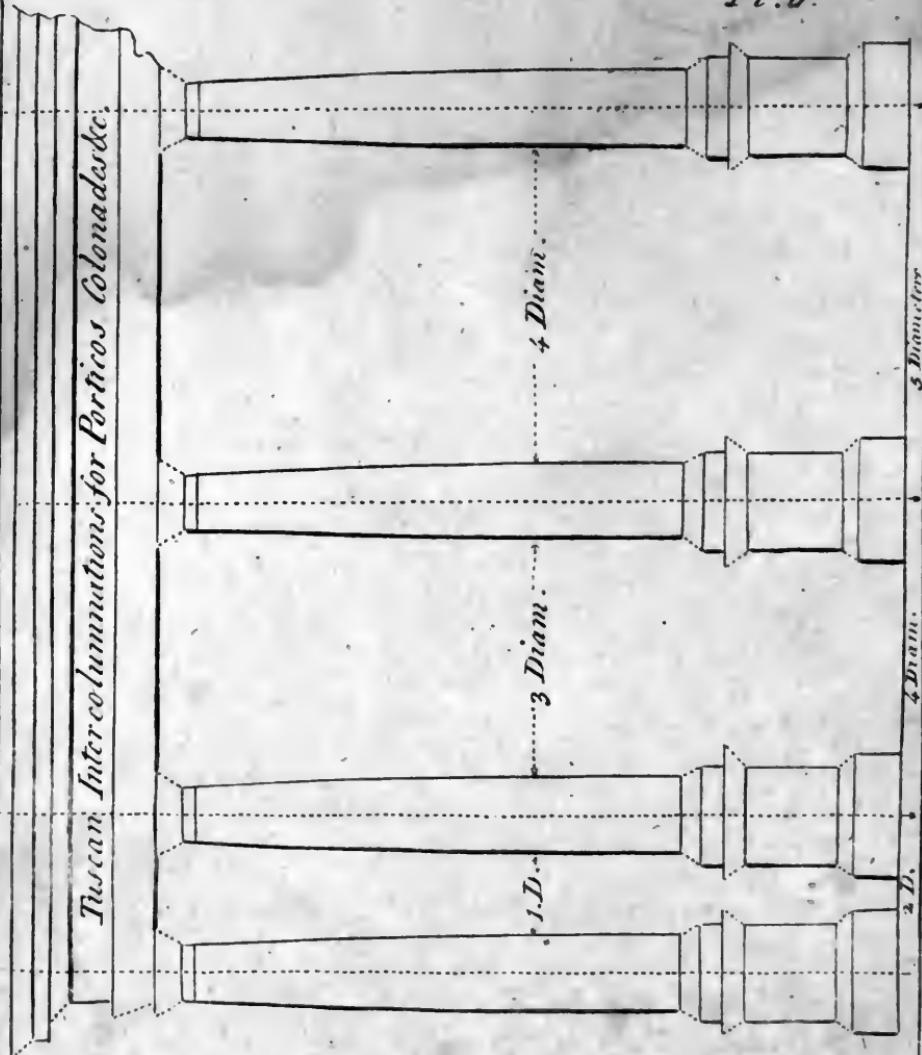
Plate 5.

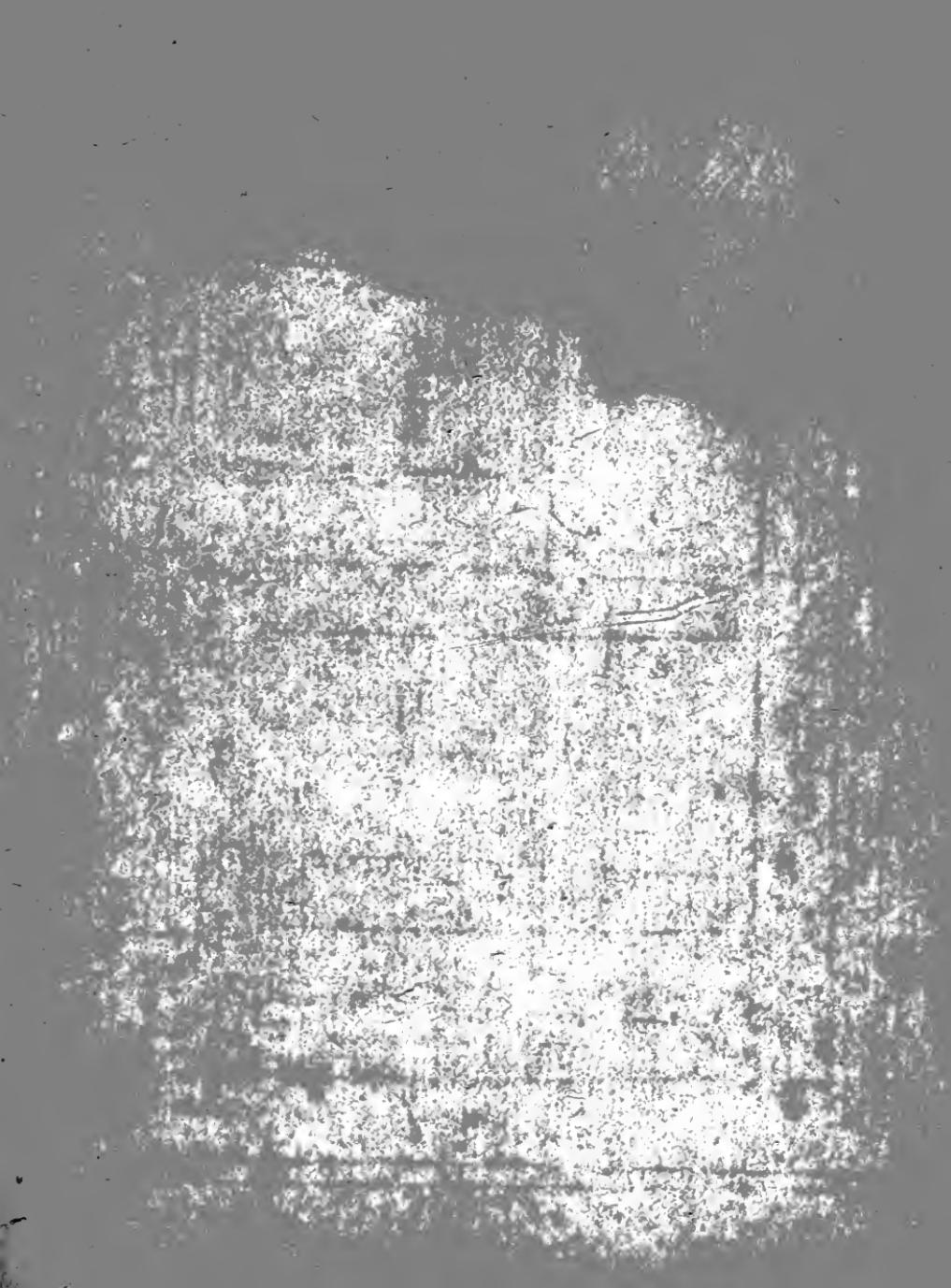




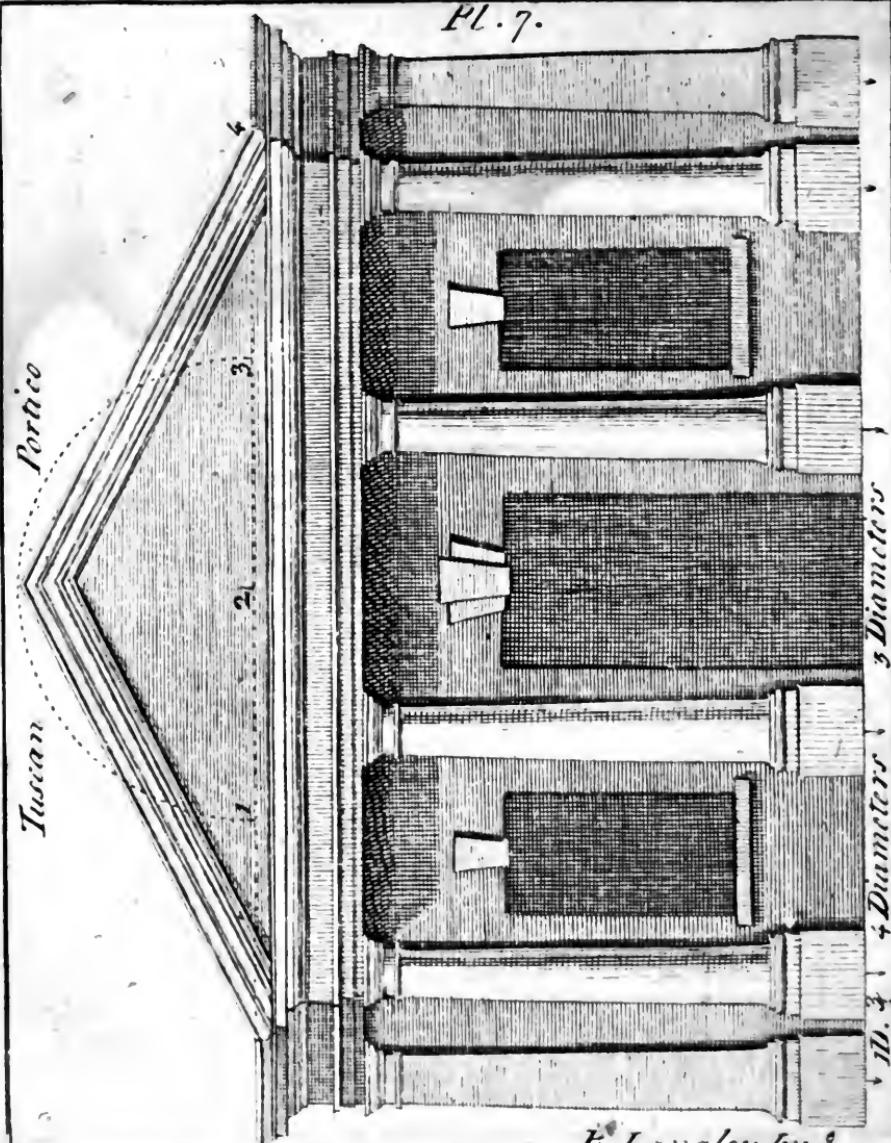


*Tuscan Intercolumniation for Porticos Colonades &c.*





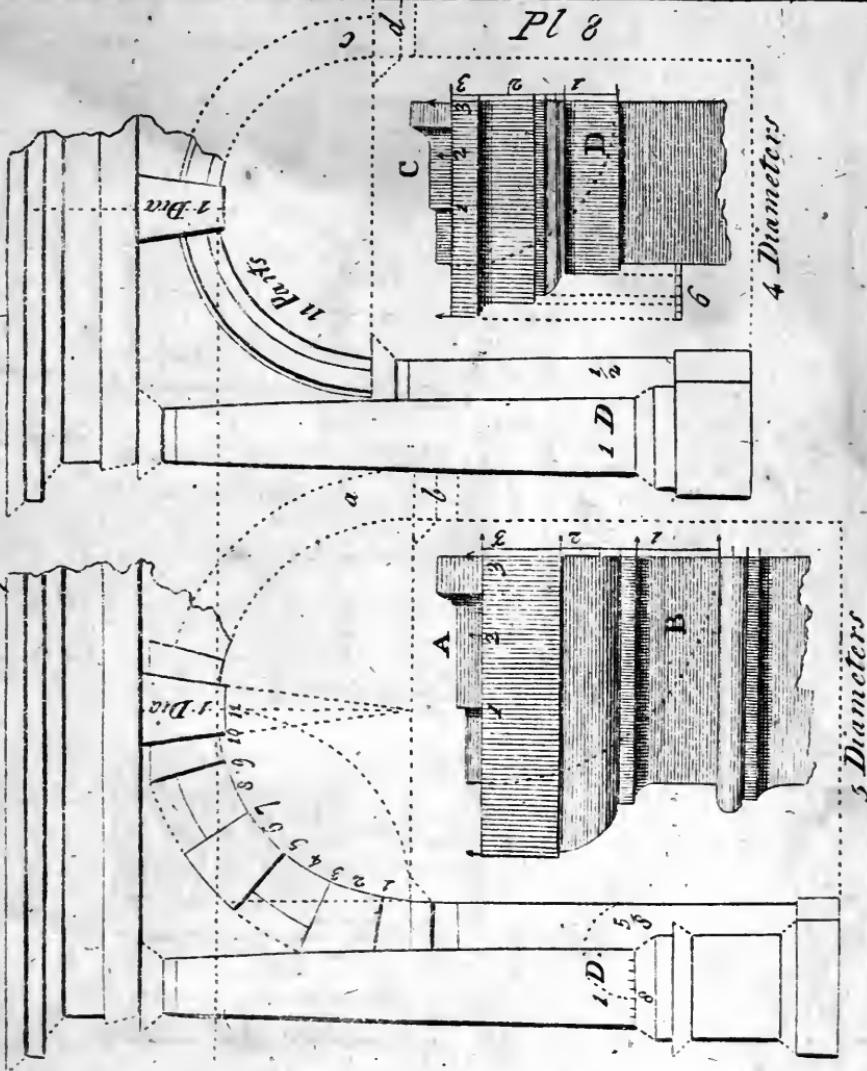
Pl. 7.

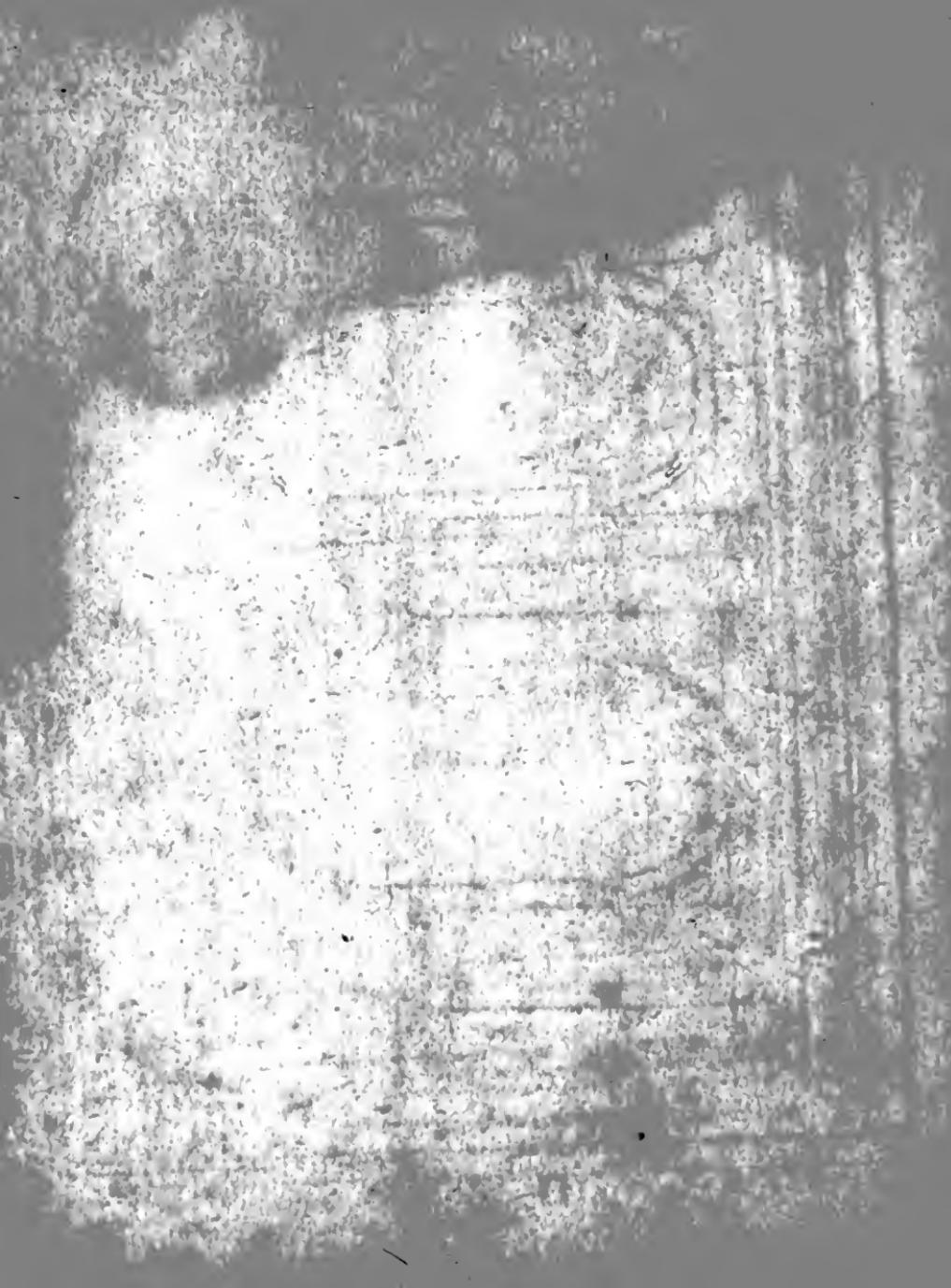


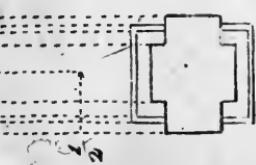
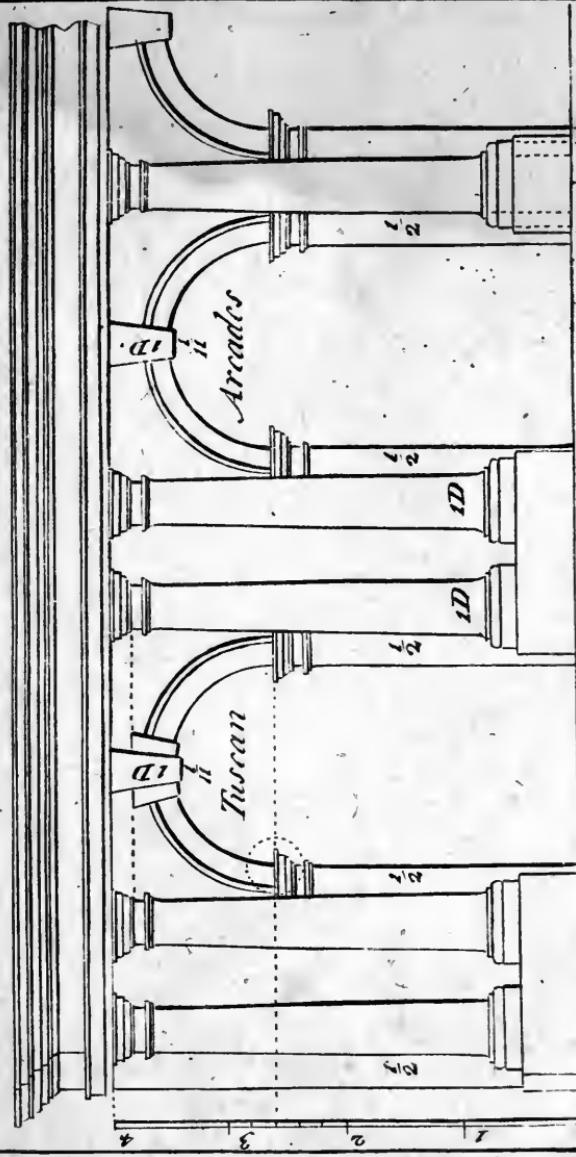
C

## *Tuscan Arches with their Imposts and Architraves;*

Pl 8



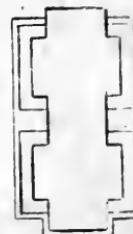
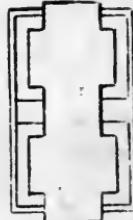




$5 Diam \cdot \frac{1}{2}$

$3 Diam \cdot \frac{1}{2}$

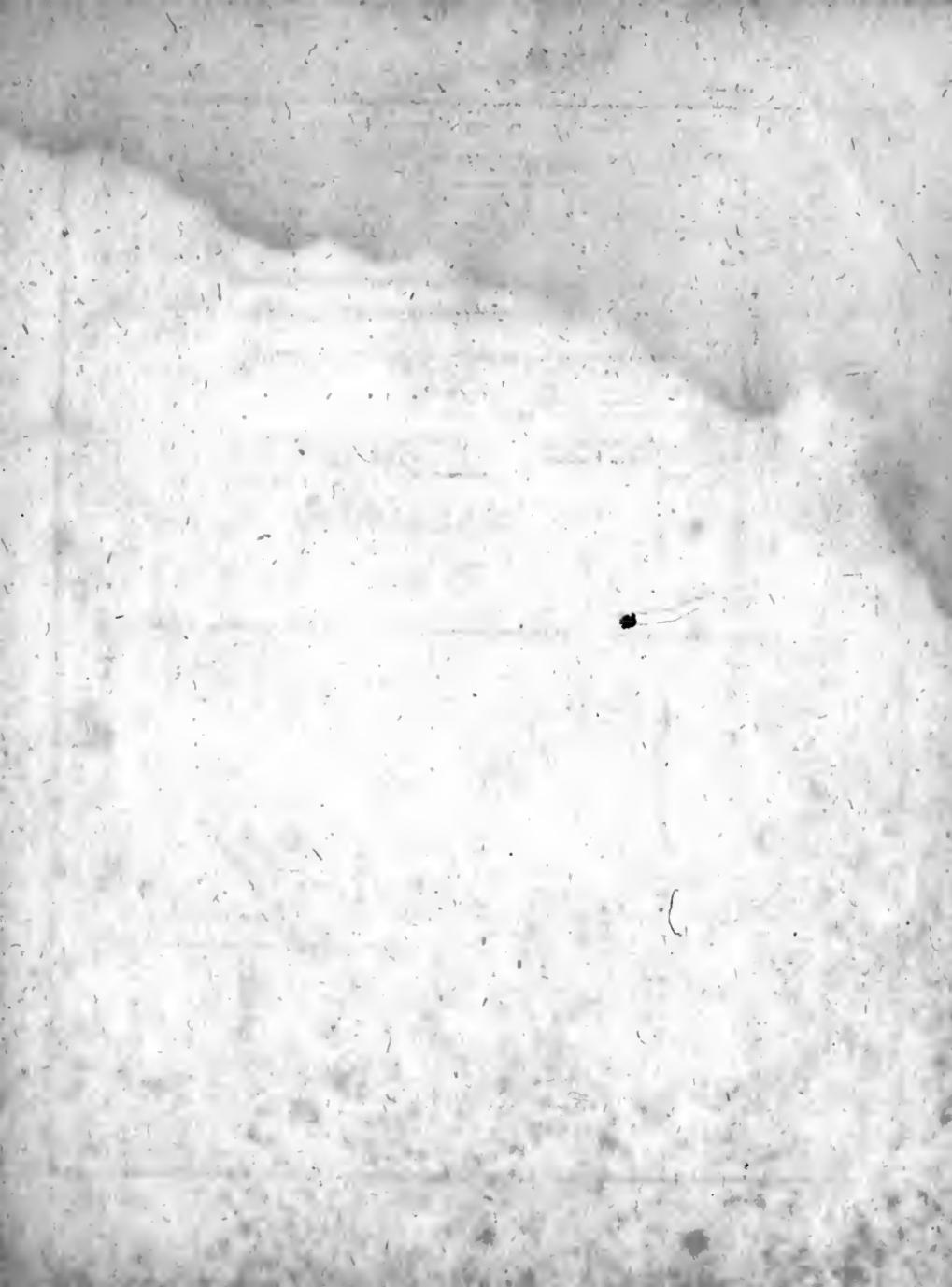
$2 Diam \cdot \frac{3}{4}$



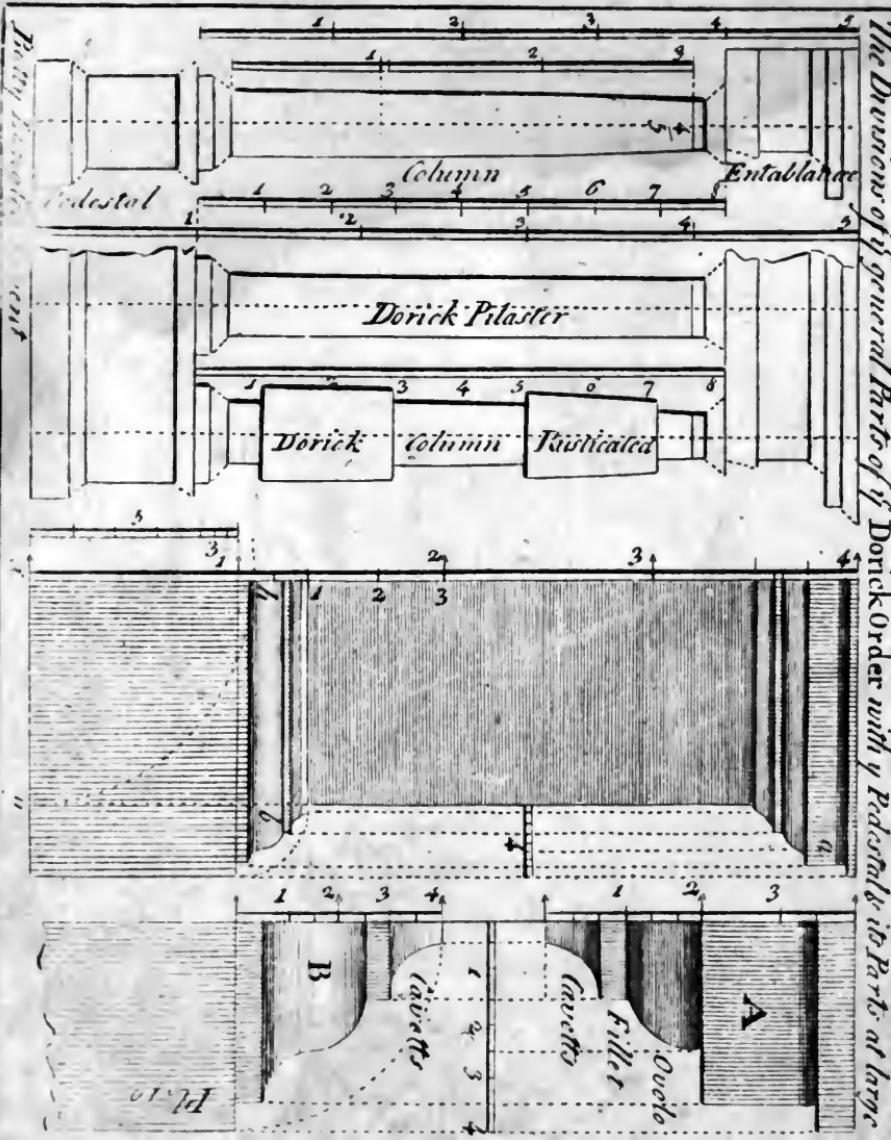
*B. Length of Dm.*

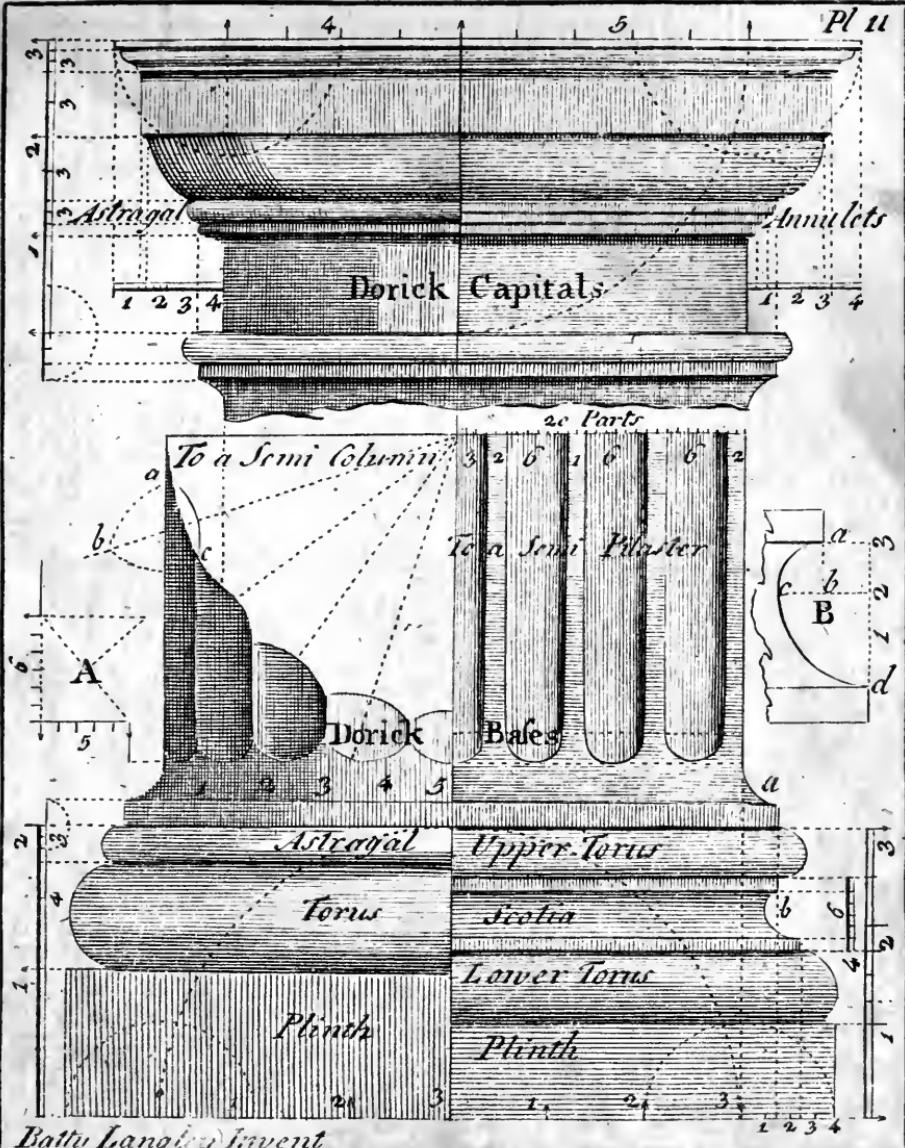
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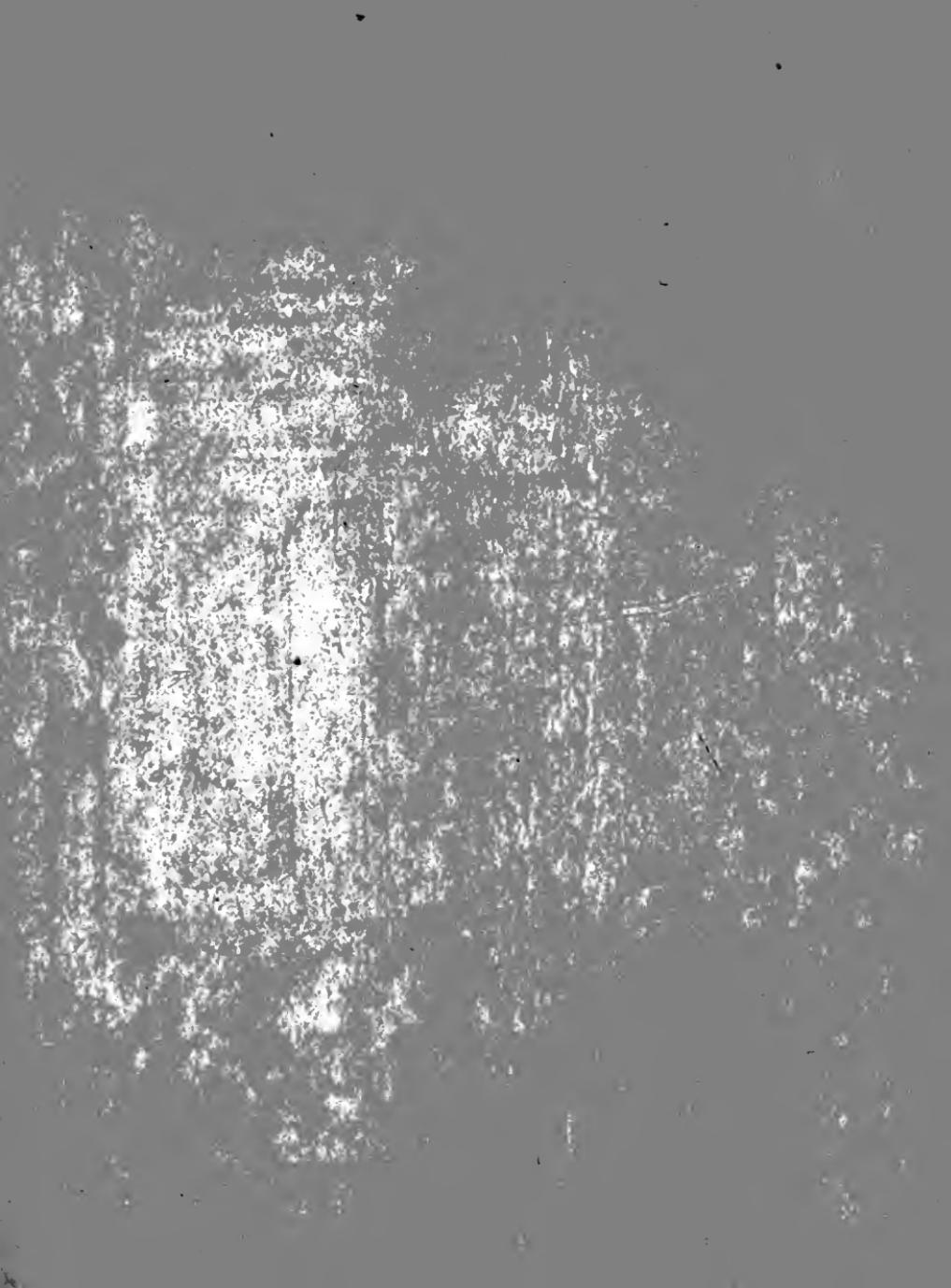


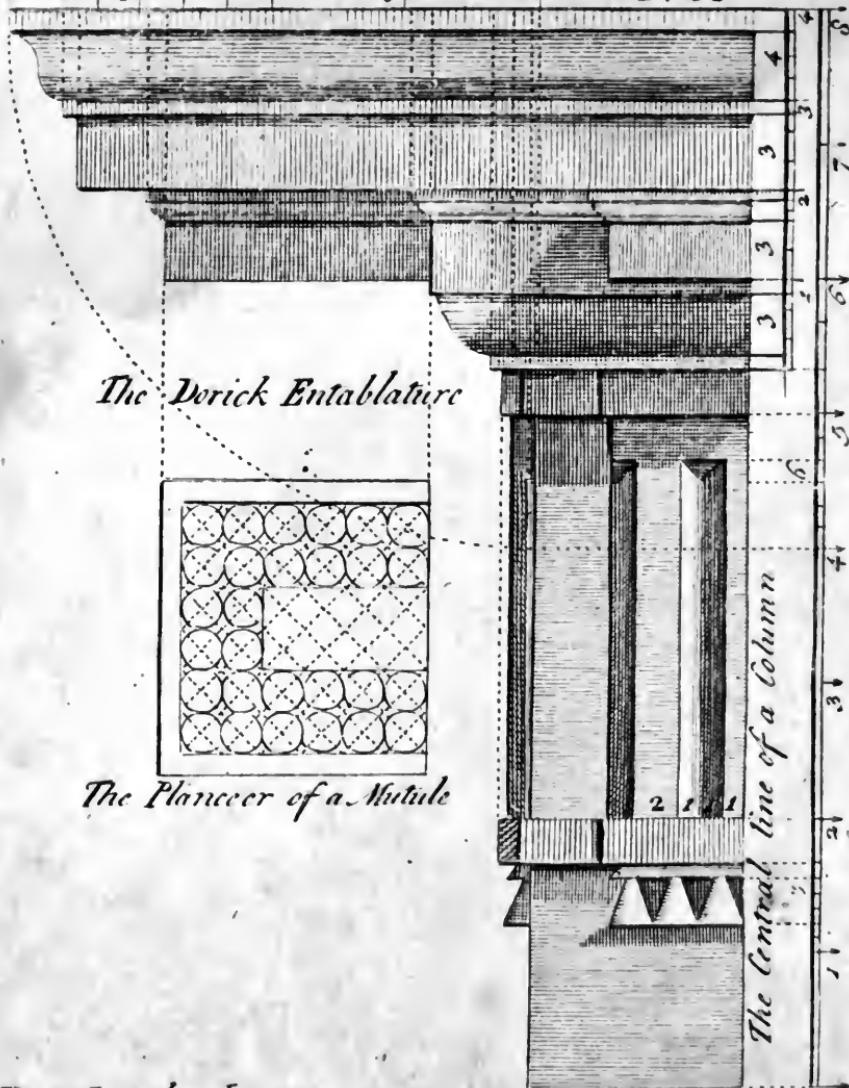
The Division of the general Parts of the Dorick Order with its Pedestal at large











*The Dorick Entablature*

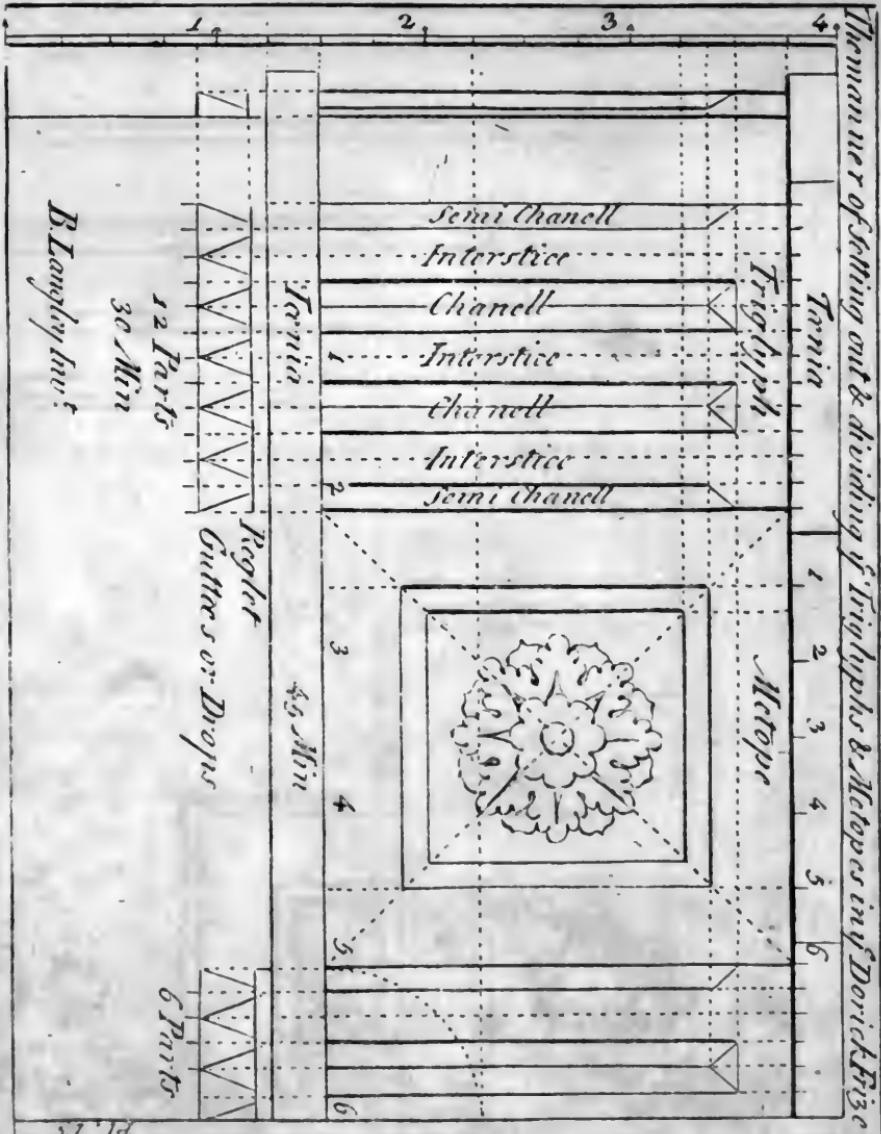
*The Planter of a Nutule*

*Batty Langley Invent*

*The Central line of a Column*



The manner of setting out & dividing of Triglyphs & Metopes in y<sup>e</sup> Dorick Frieze



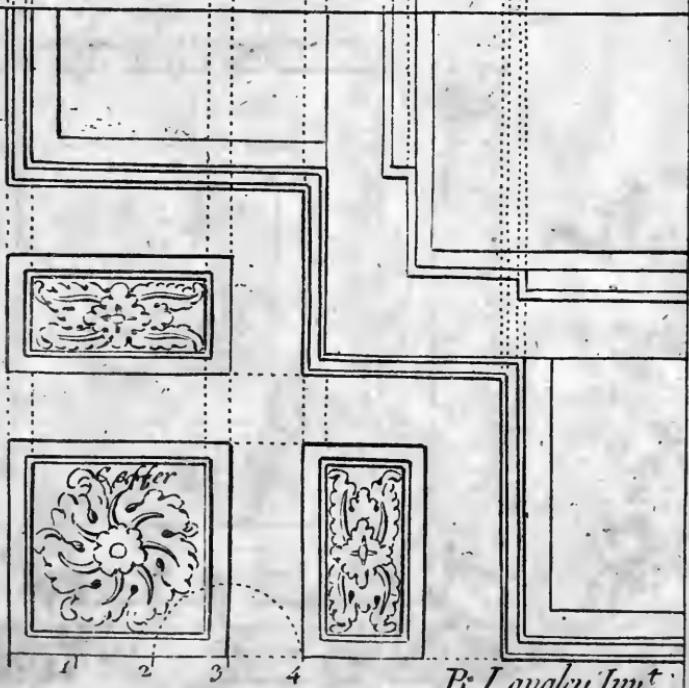
E

1 2 3 4 5

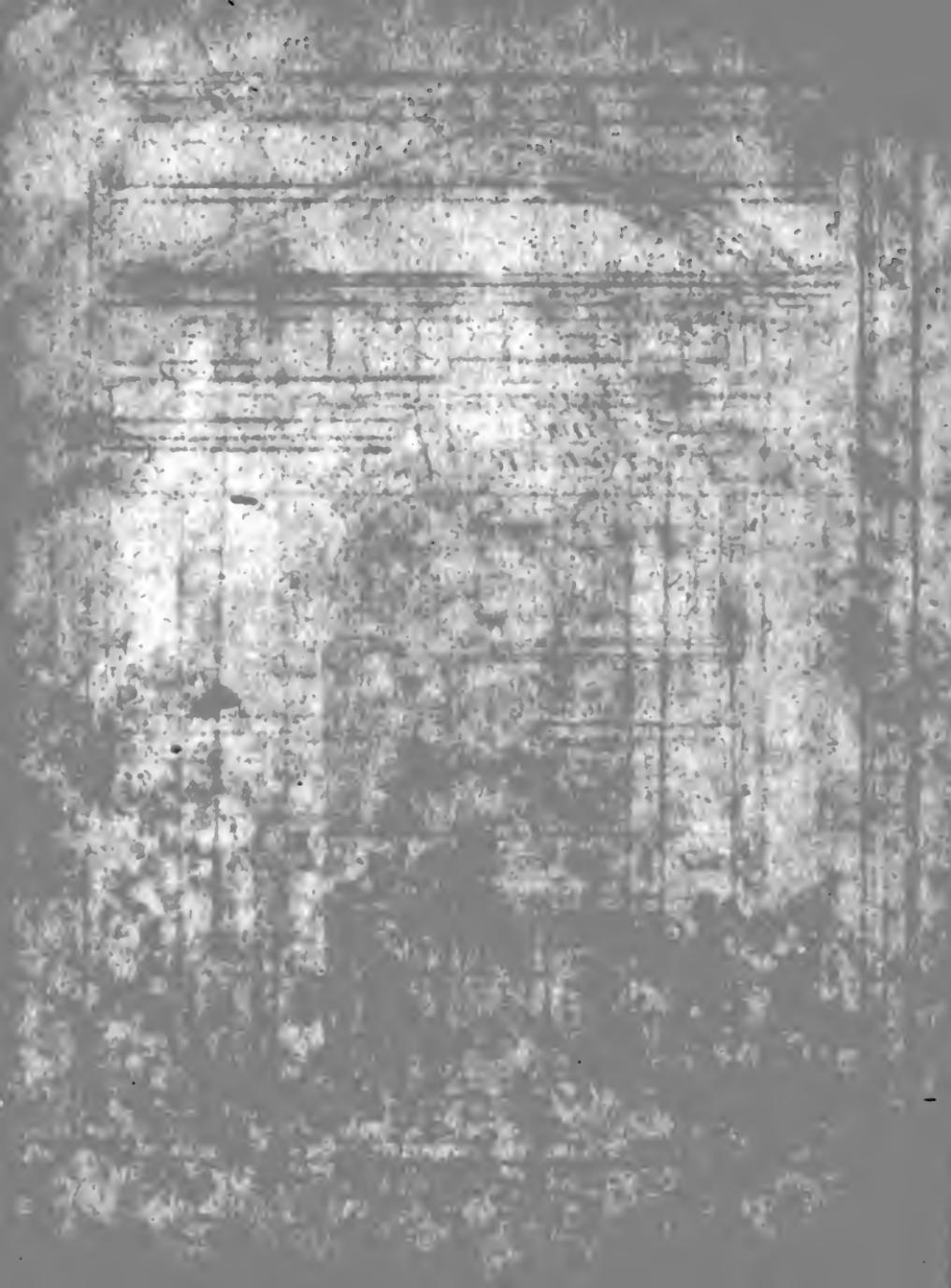
Mutule

2 Mutule

The Planche of the Dorick  
Cornice at an external  
Angle Vide Plate XII

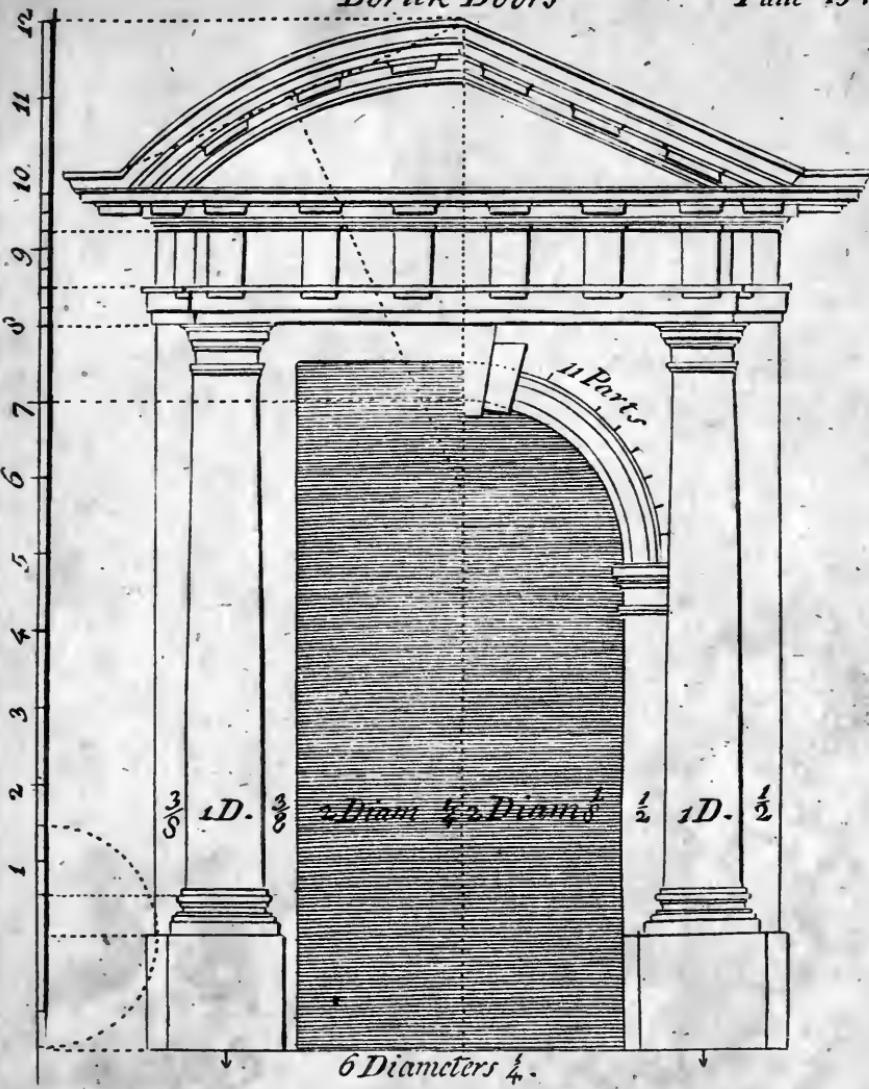


B. Langley Inv.

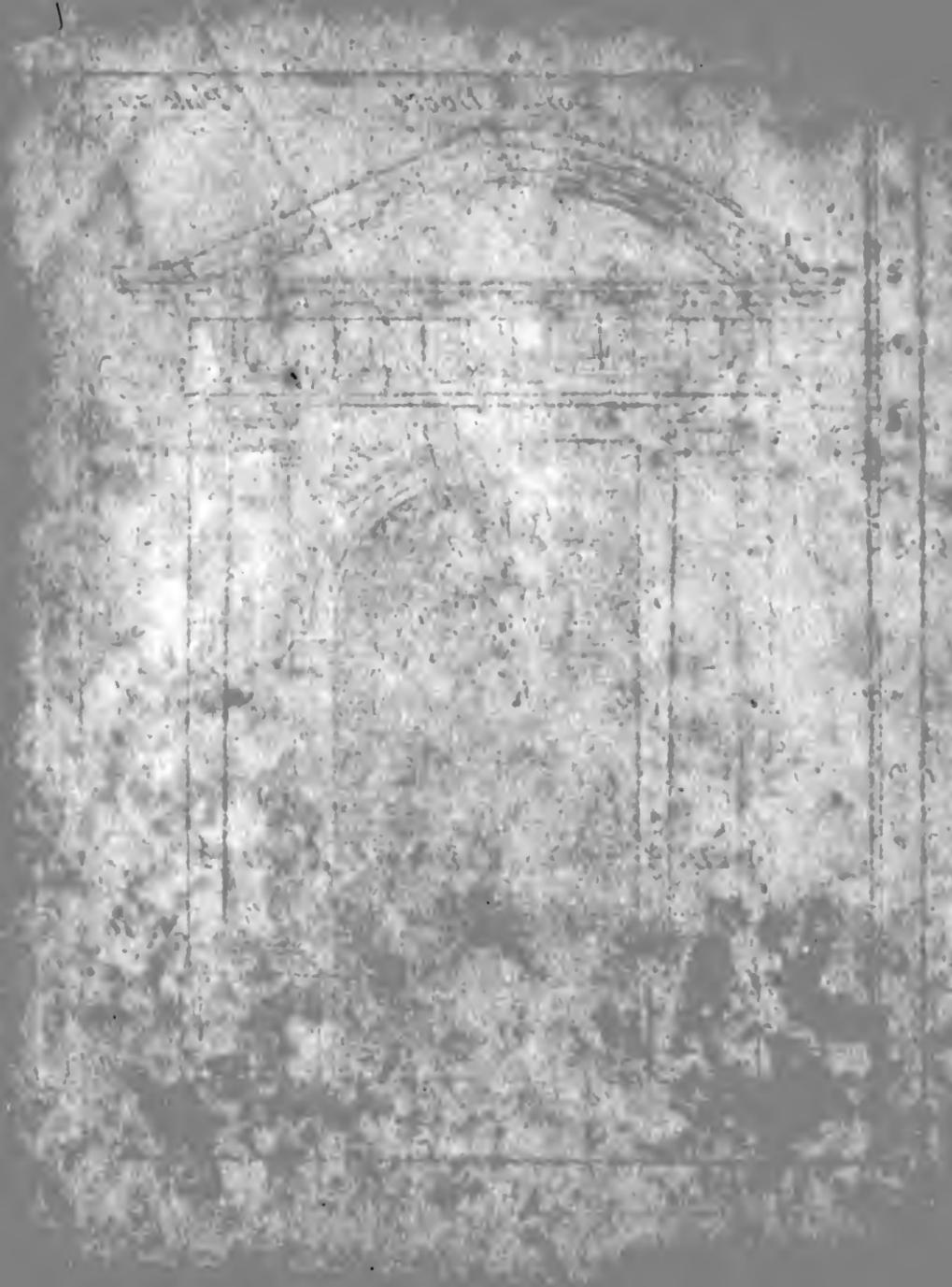


Dorick Doors

Plate 15.



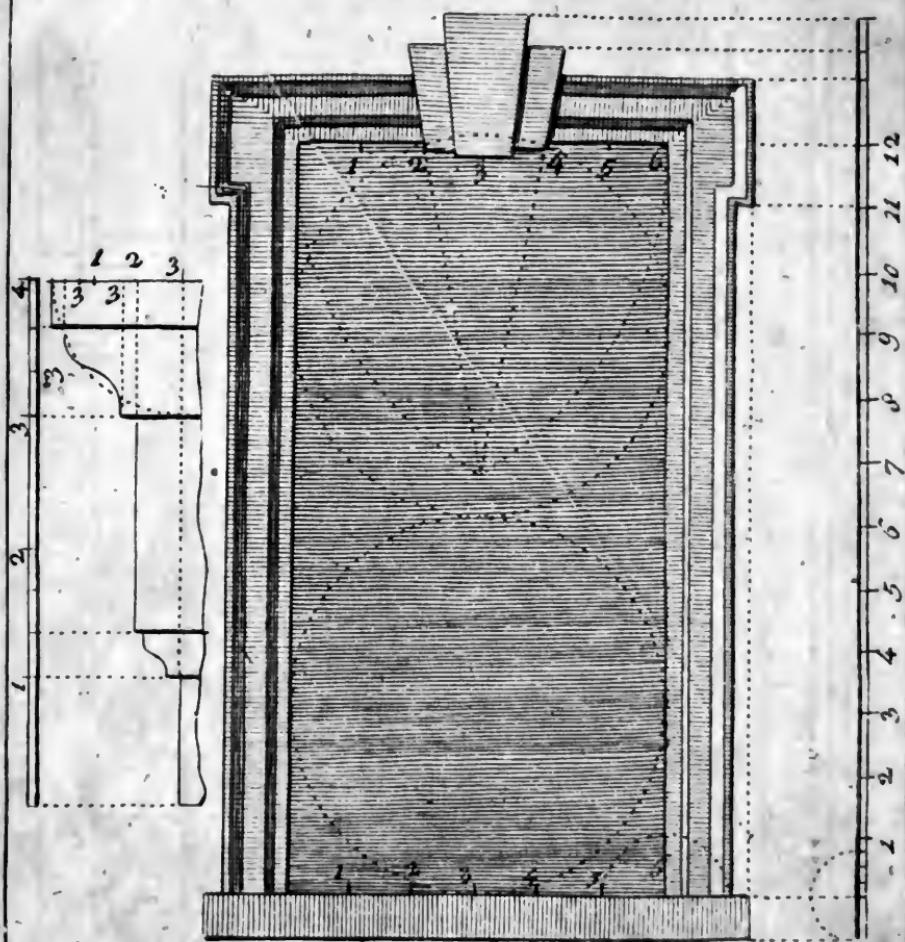
F





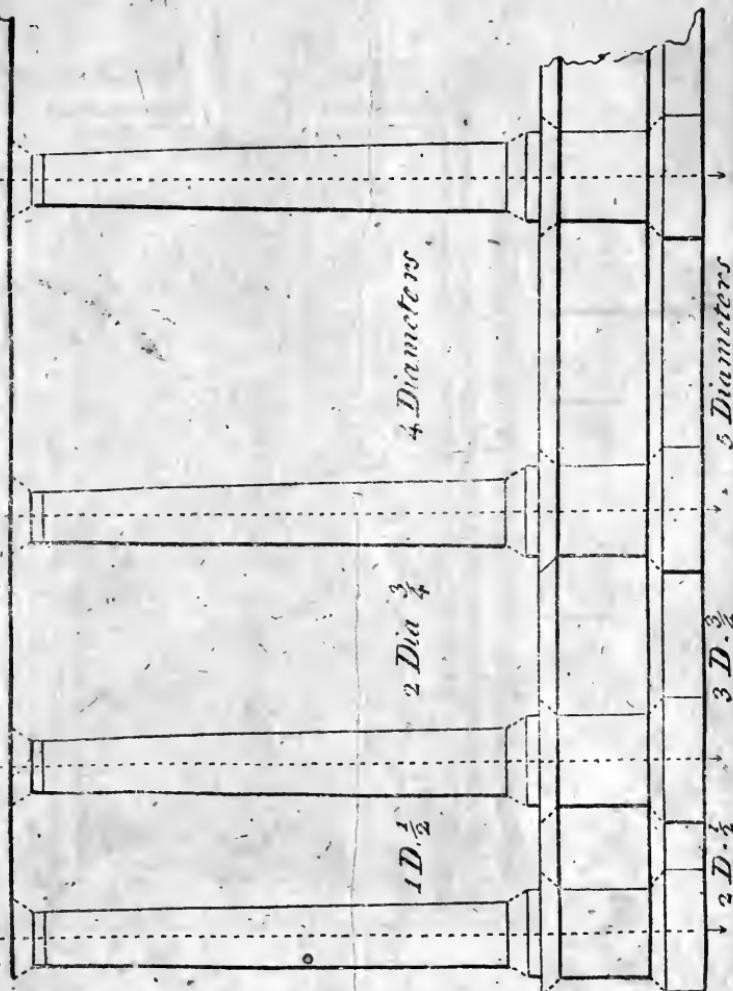
*Dorick Window*

*Plate 16.*

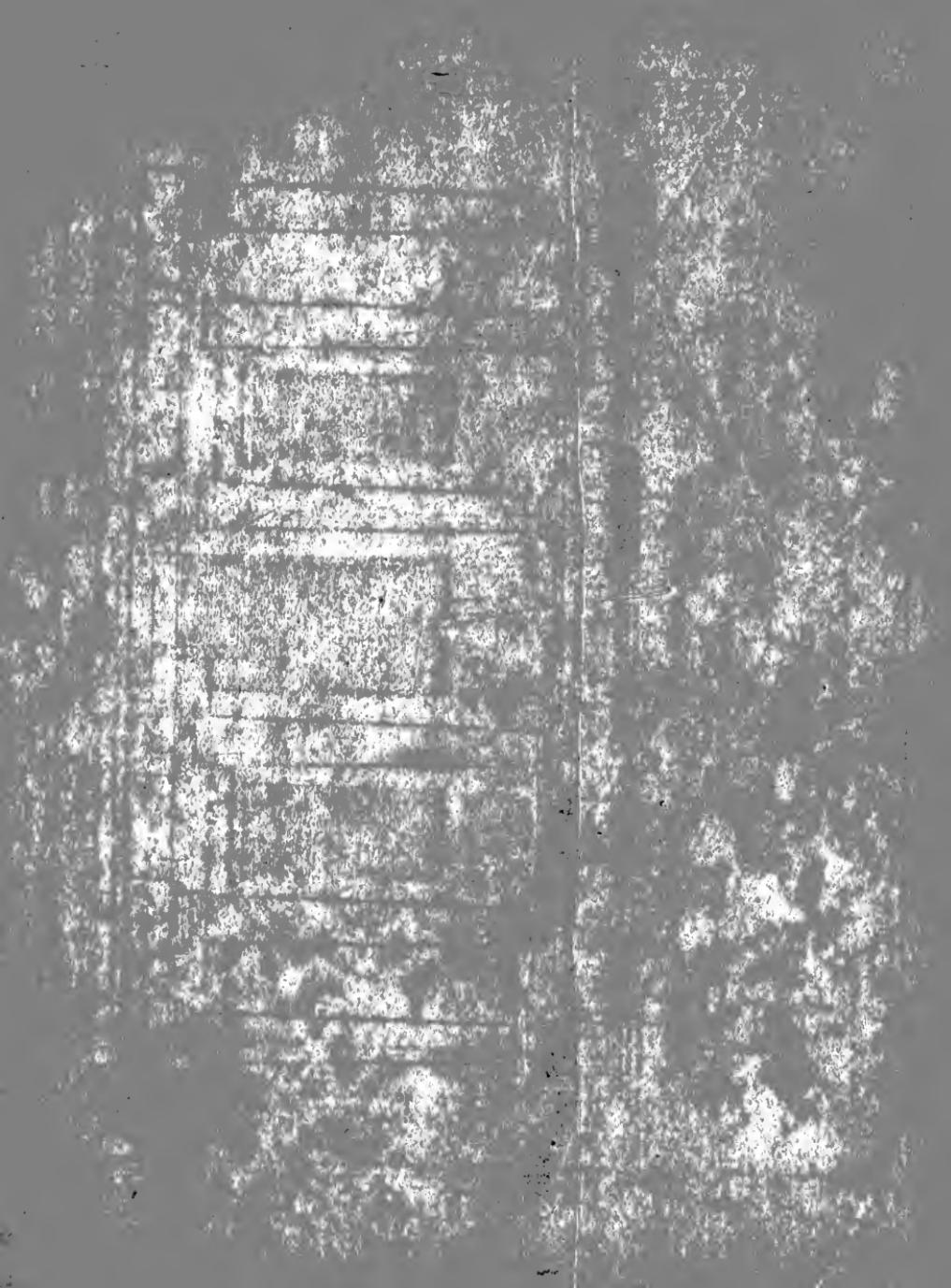


Dorick Intercolumniations in Porticos Colonades &c.

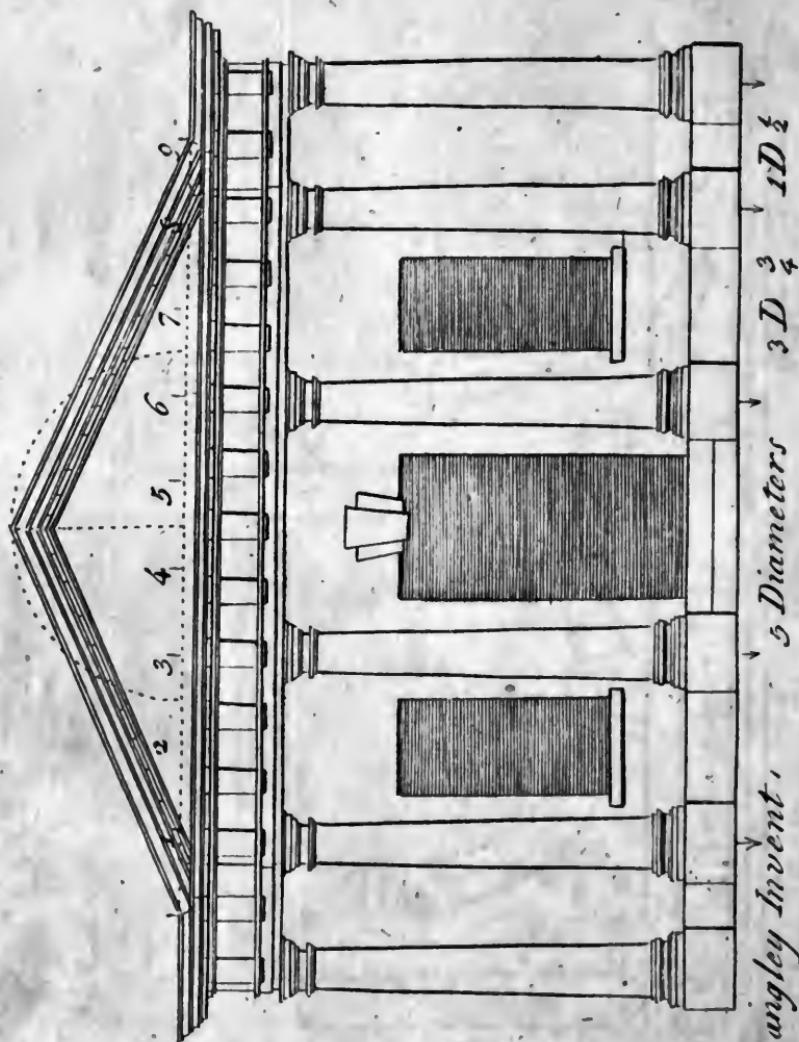
Pl. 17.







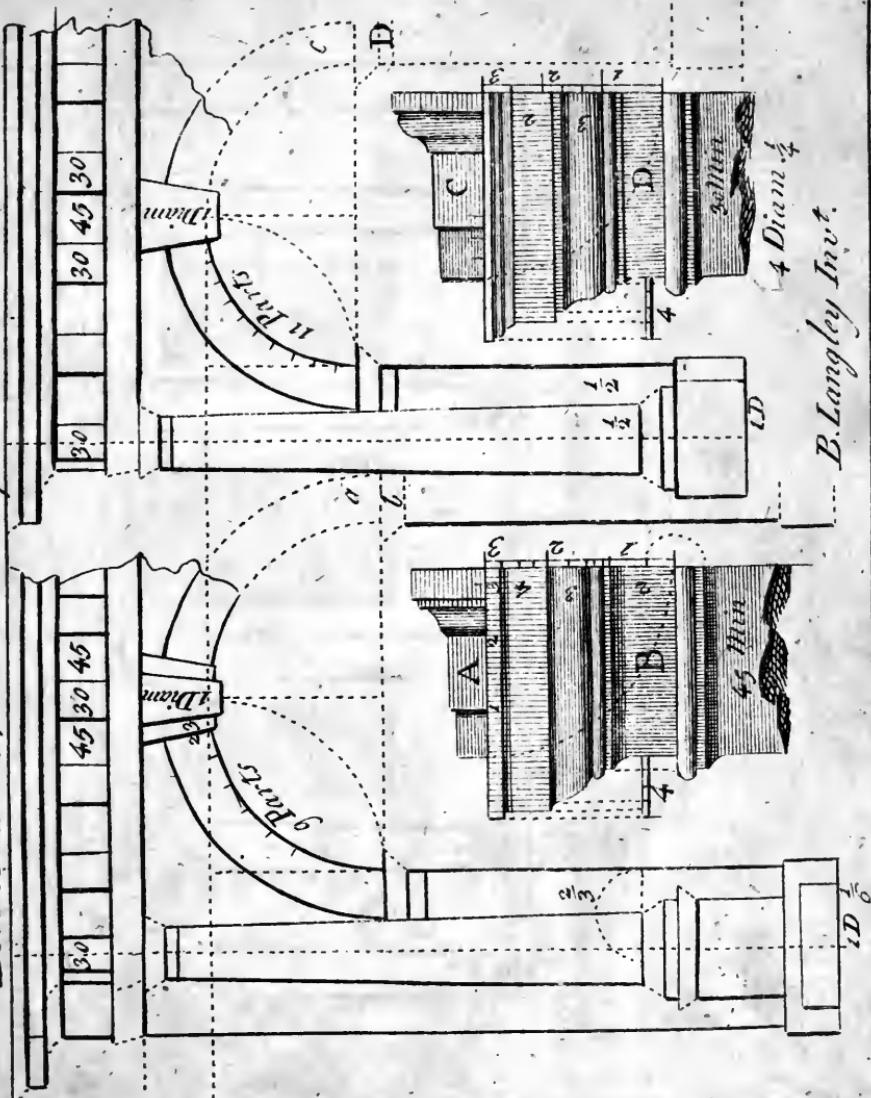
## Dorick Portico



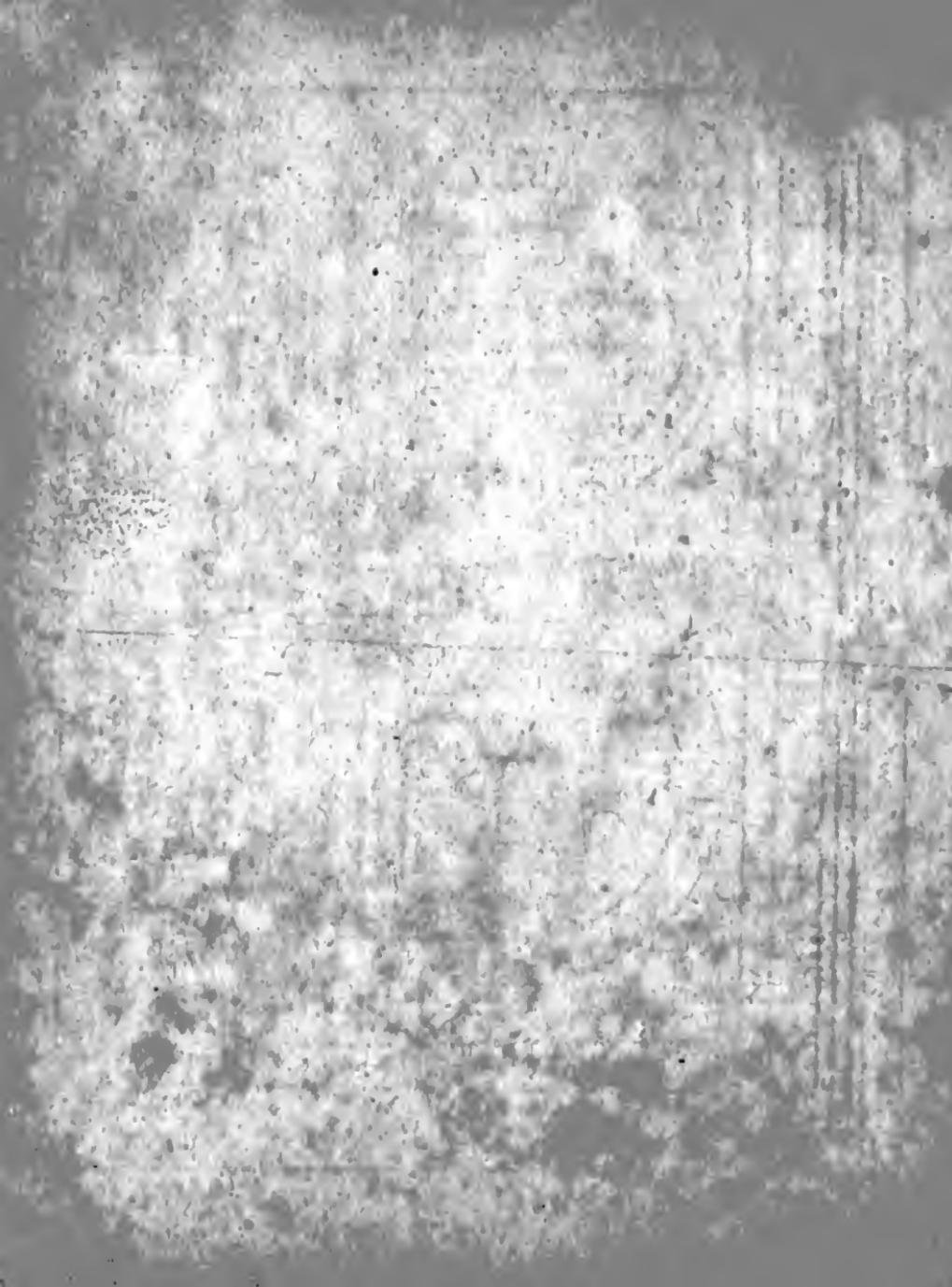
## B Langley Invent.

*Dorick Arches, with their Imposts & Architraves*

Pl. 19.

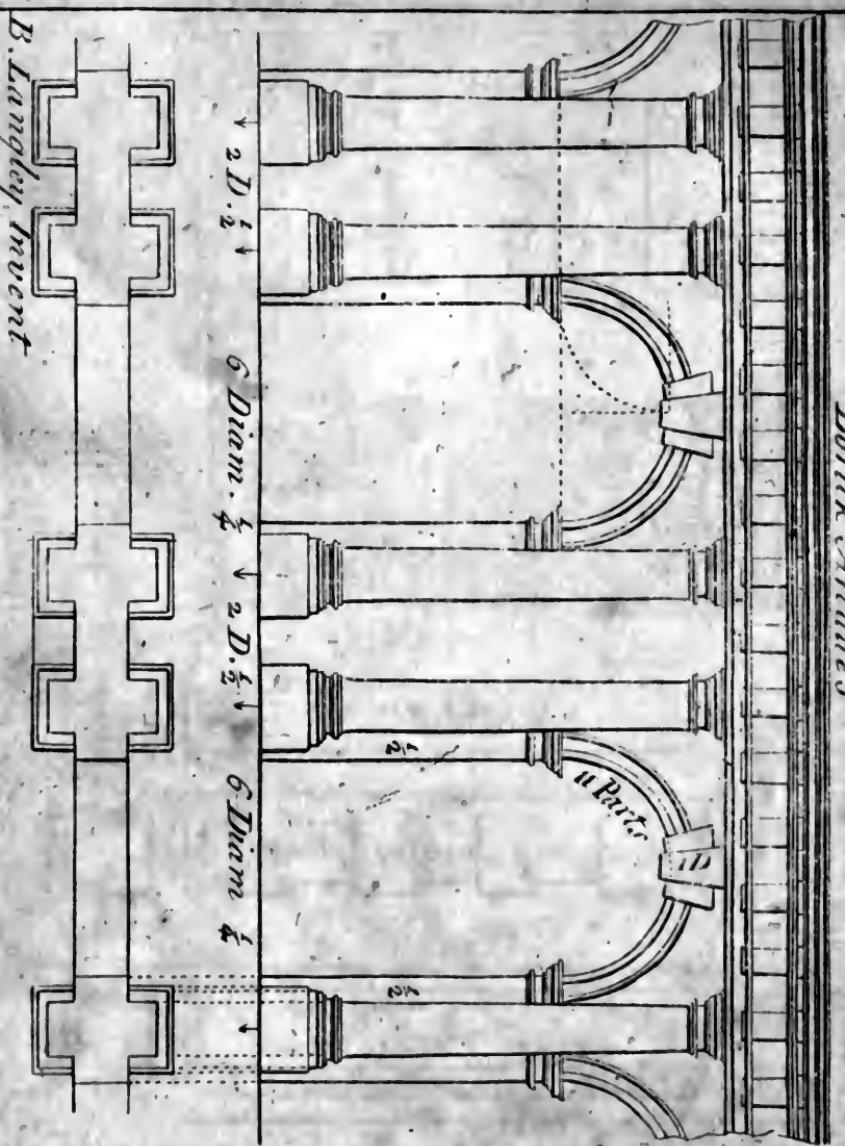


B. Langley Inv.

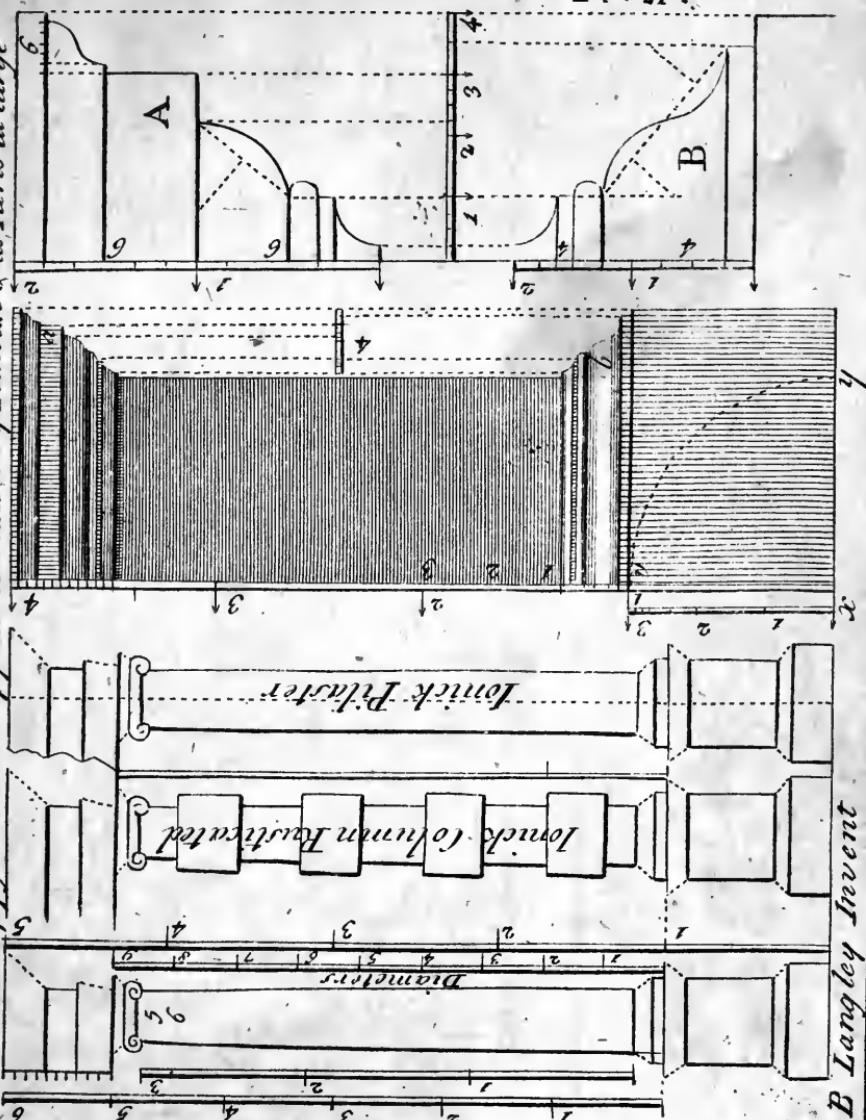




Dorick Arched

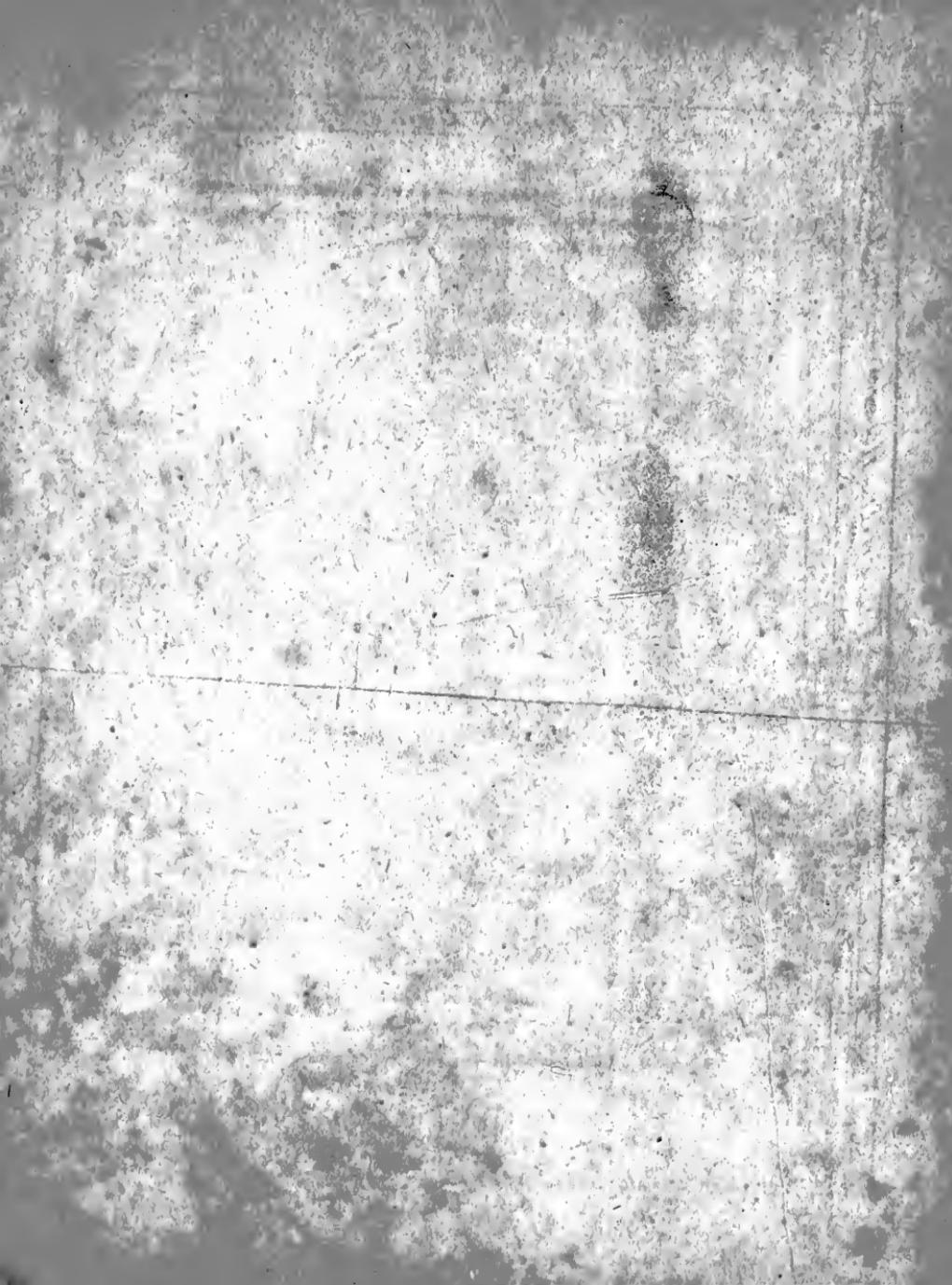


The Divisions of yigemall Parts of y Ionick Order in th<sup>rd</sup> & Pedestal & its Parts at large



B Langley Invent

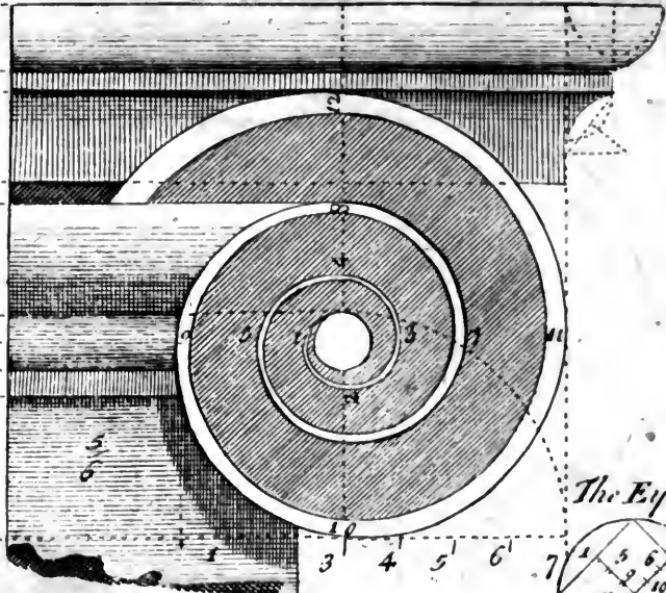




The Ionick Base & Volute

Pl. 22

The entire Height a semi Diameter

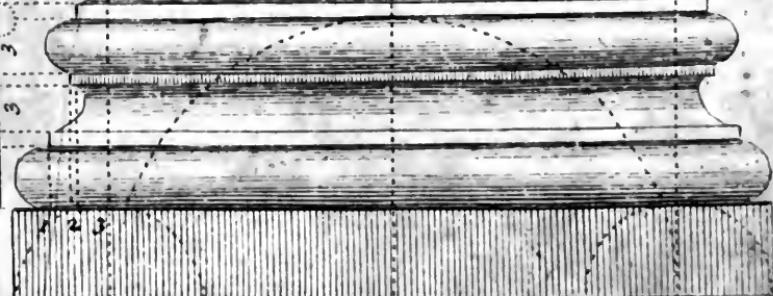


To Flute this Shaft vide Plates 25. 27.

The Eye of



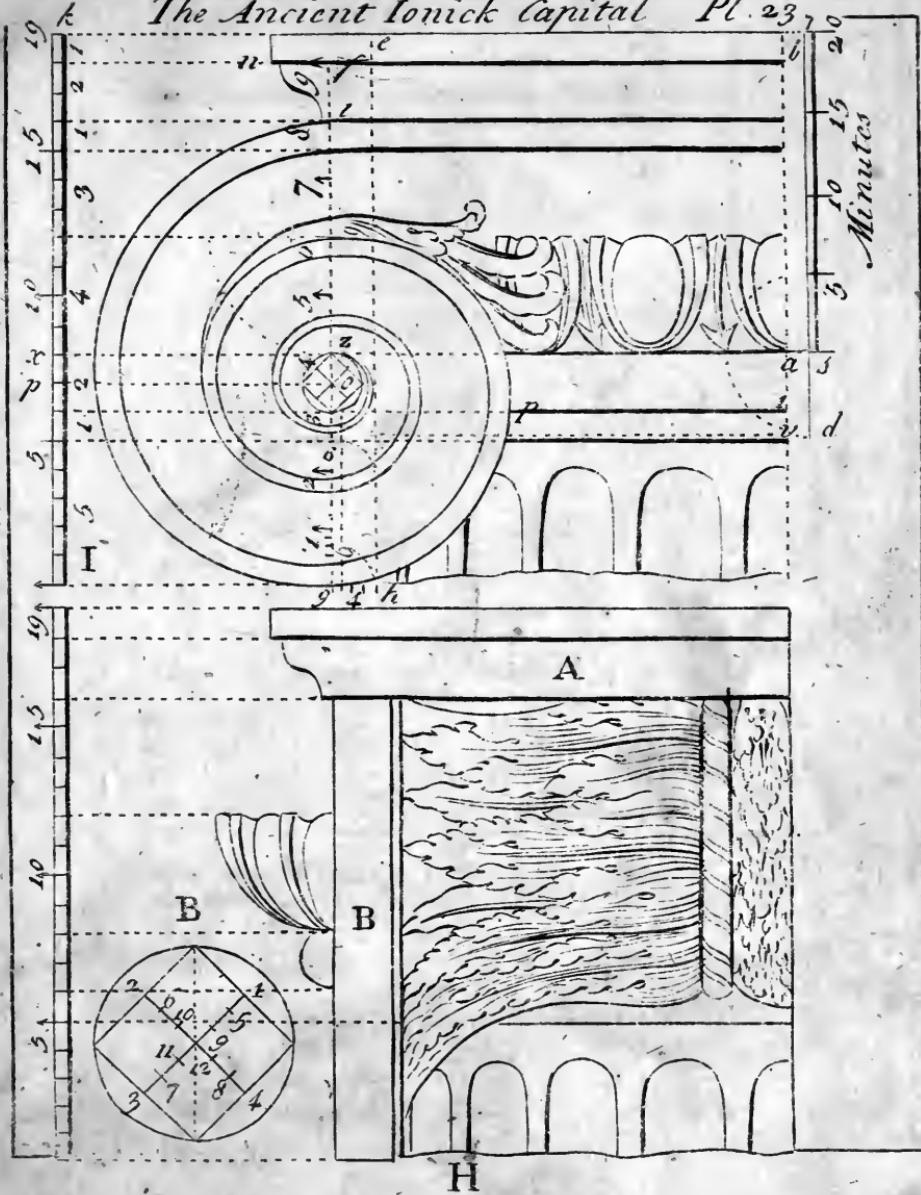
the Volute  
at large

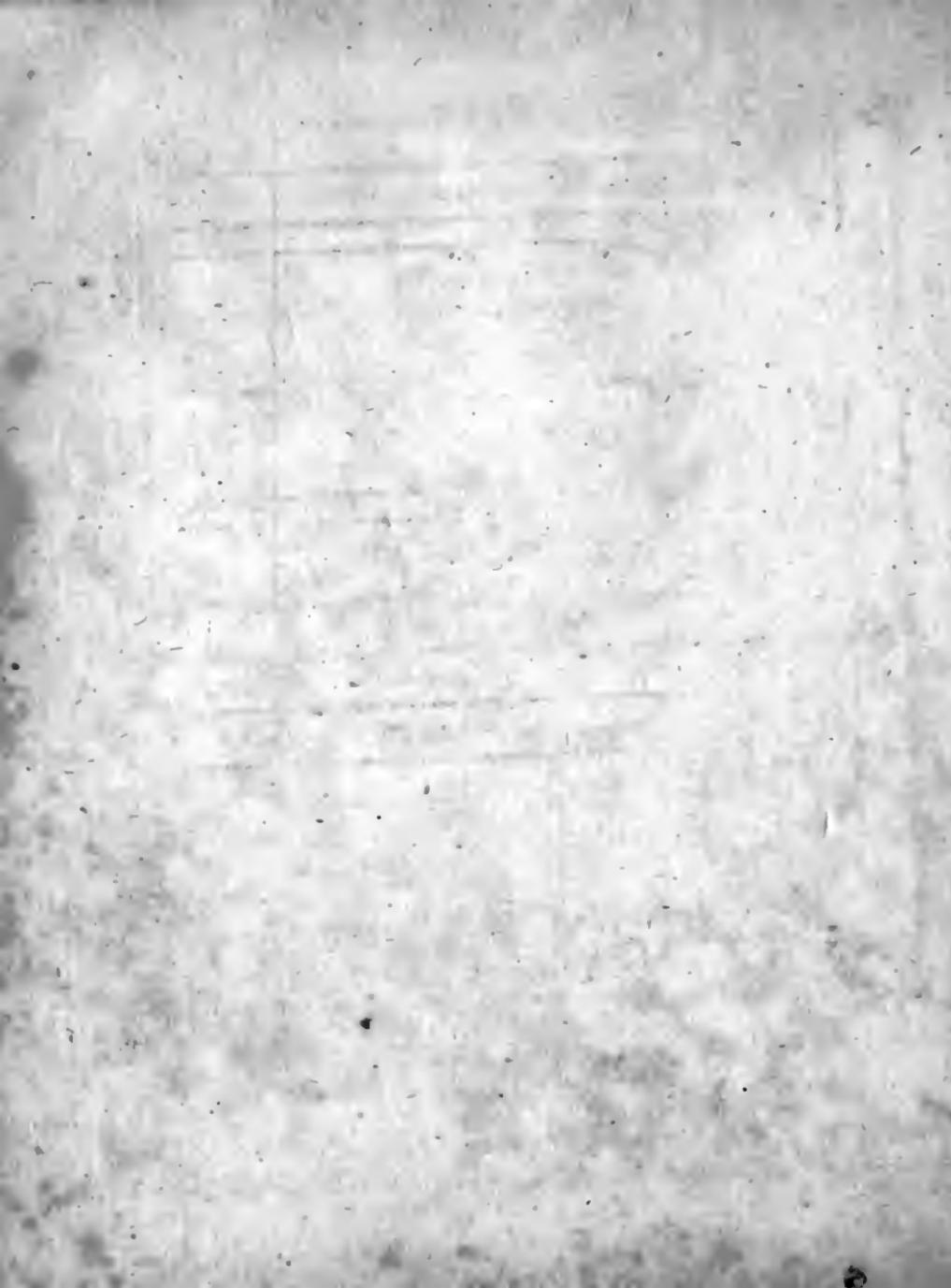


B Langley Invent.

2 3 4 5 6

*The Ancient Ionick Capital* Pl. 23.

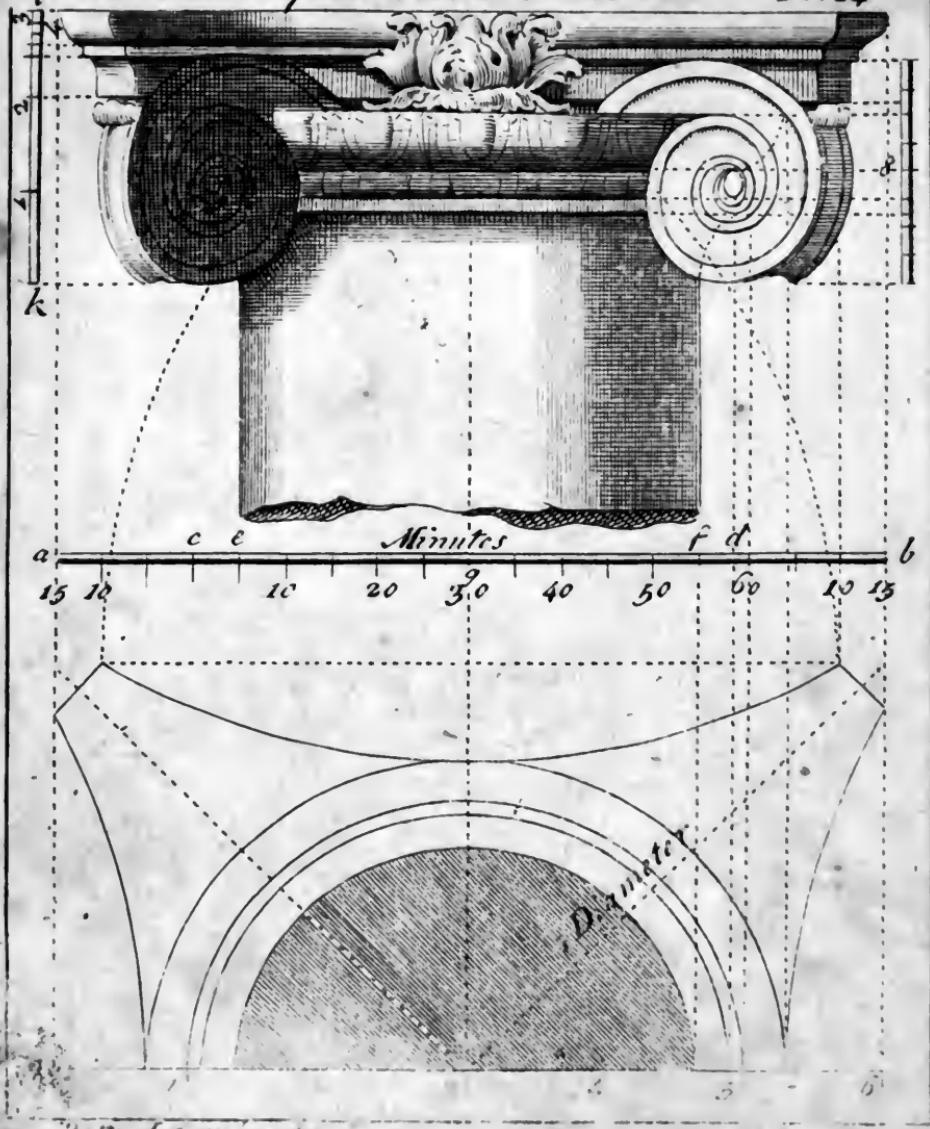


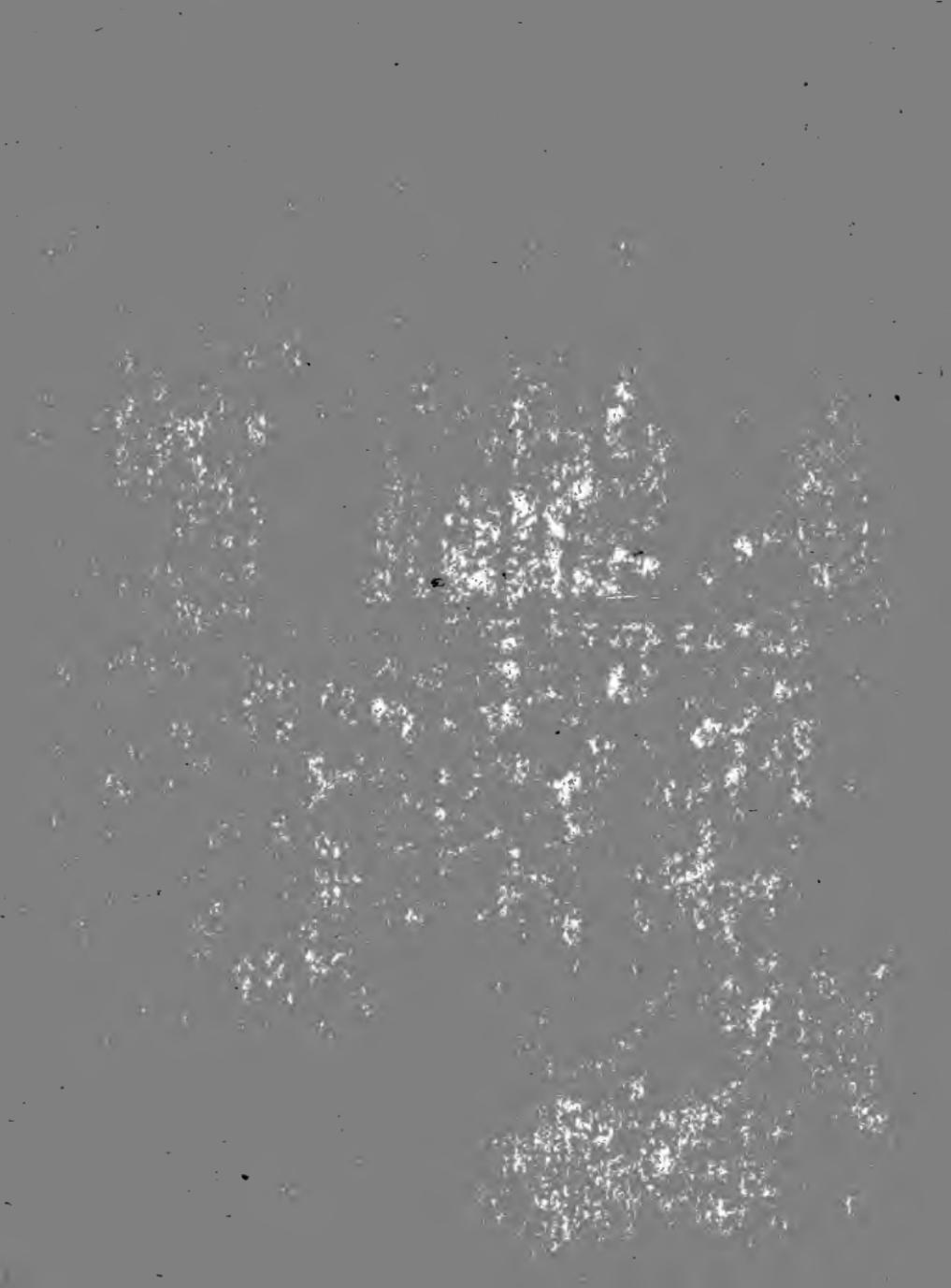




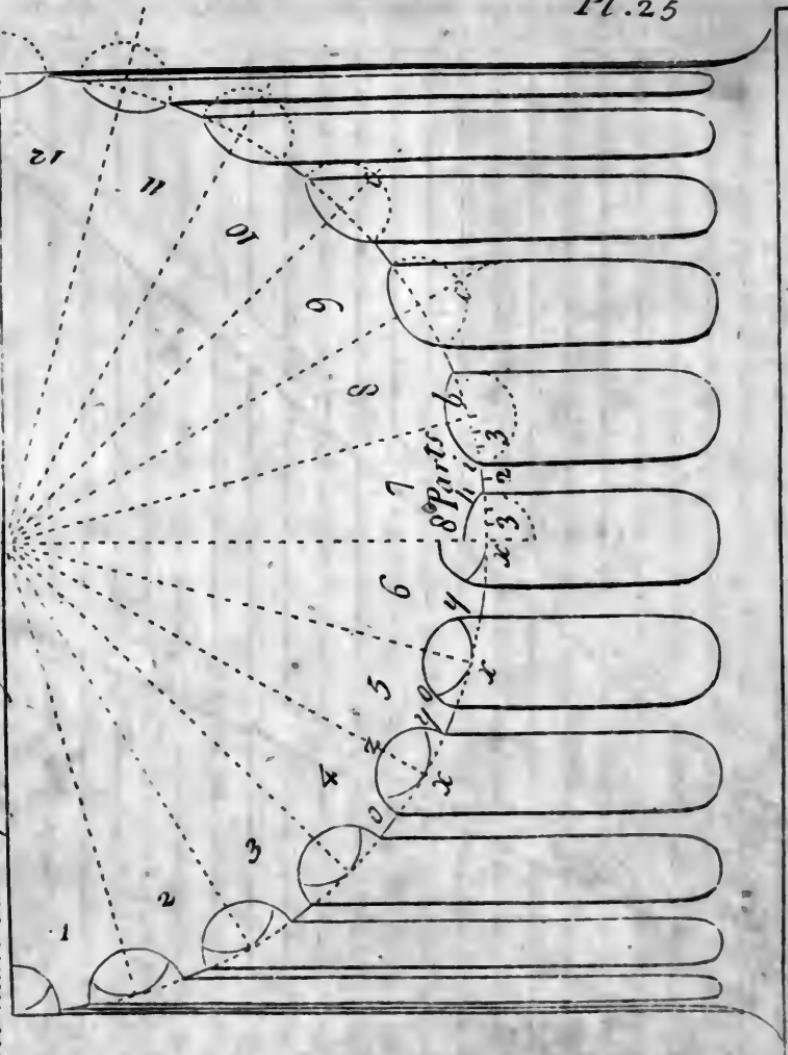
*The Ionick Capital with its Semi Plan*

Pl. 24



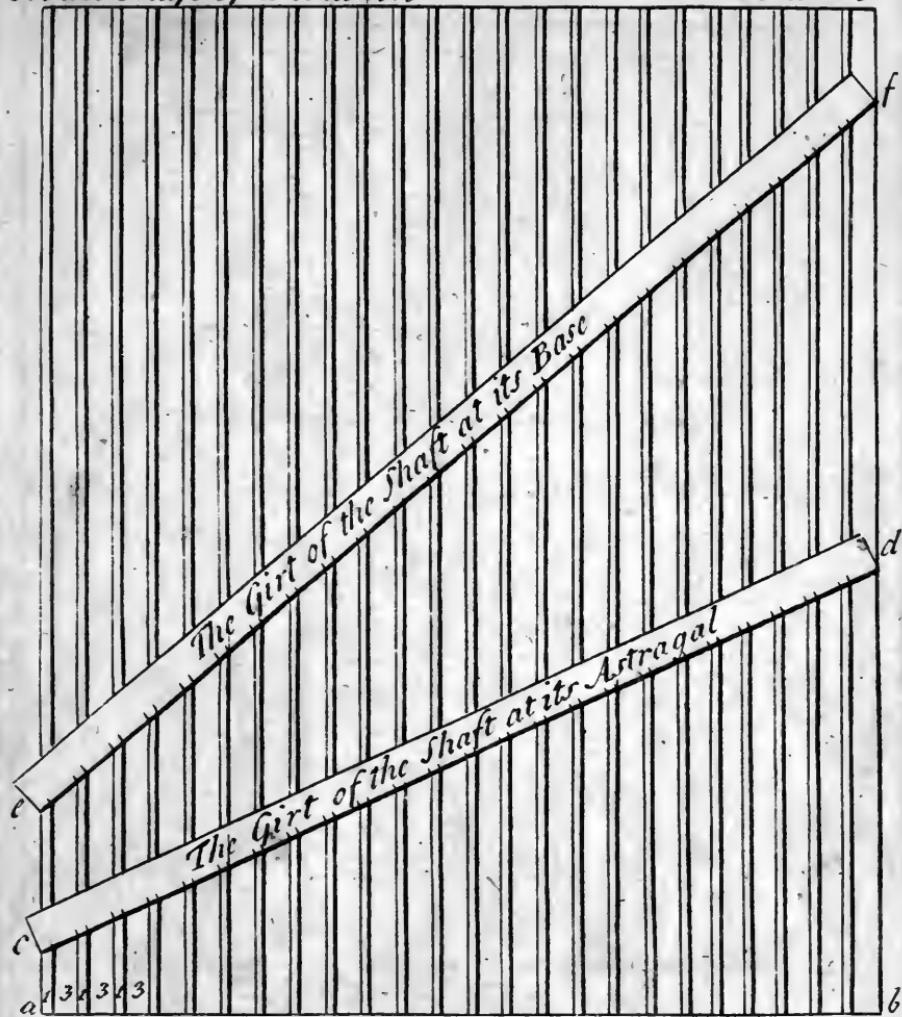


*The manner of Fluting Linick & Corinthian Columns*

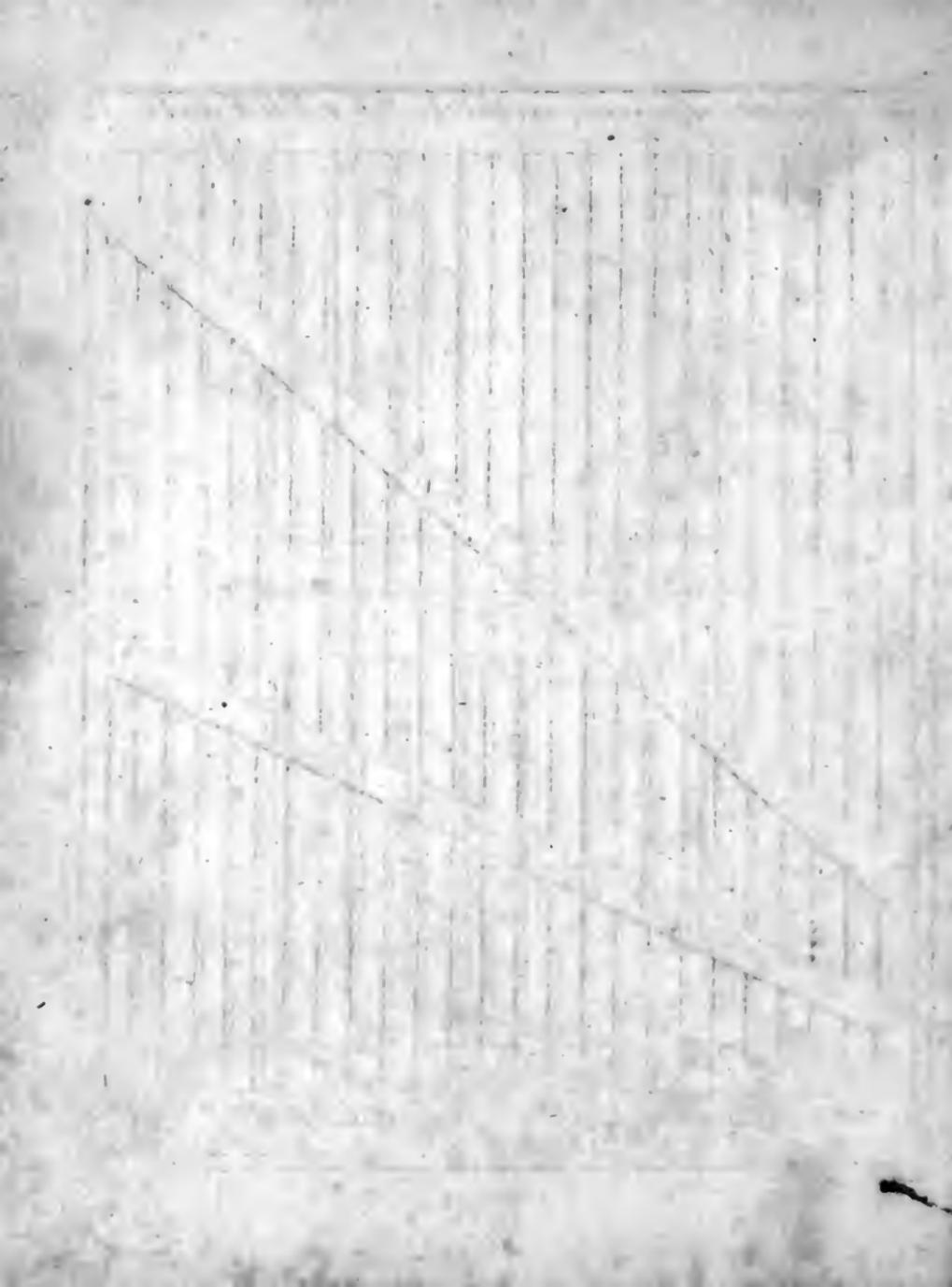


The manner of transferring the Flutes & Fillets  
on the Shaft of a Column

Plate 26

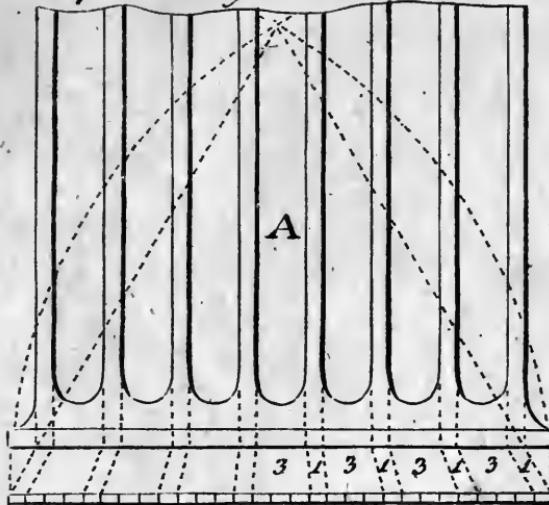


Divide a given length, less than if Circumference in 24 p.<sup>ts</sup>  
each part in 4 then 1 is a Fillet & 3 is a Flute

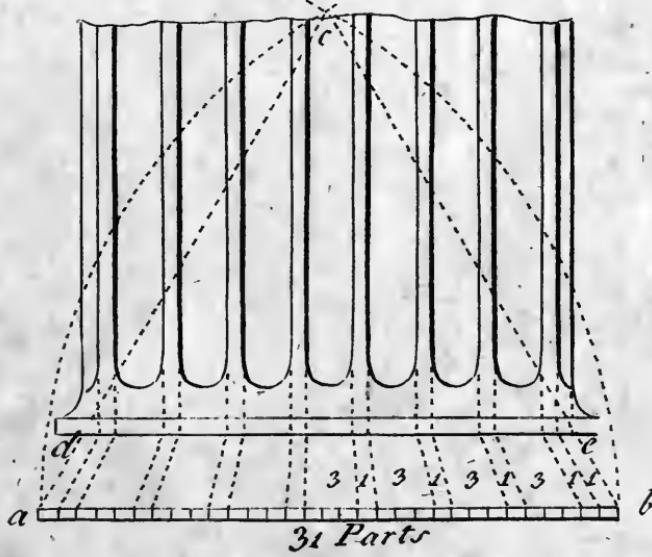


*The Manner of dividing the Flutes & Fillets of Pilast<sup>r</sup>*

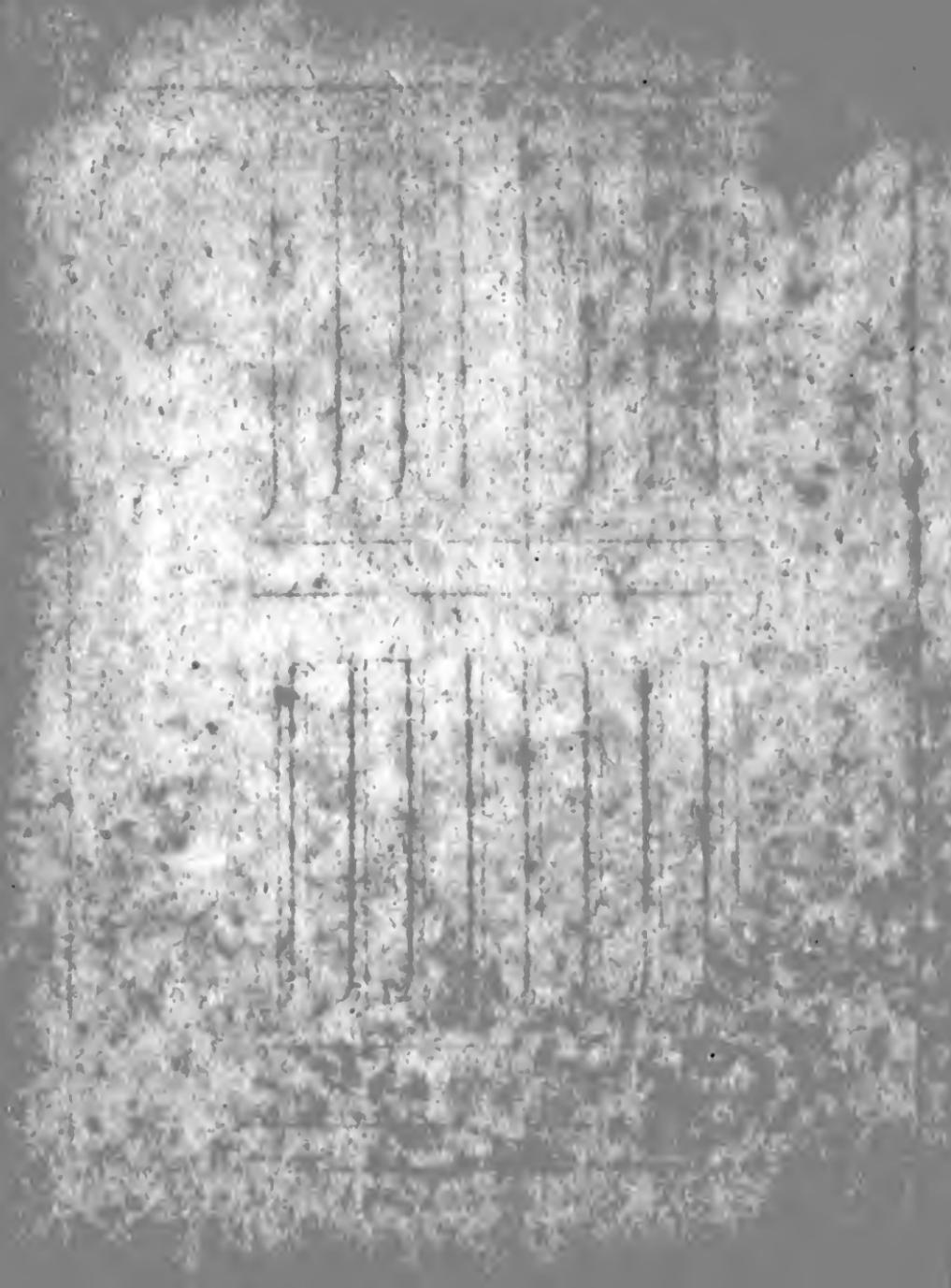
Plate 27

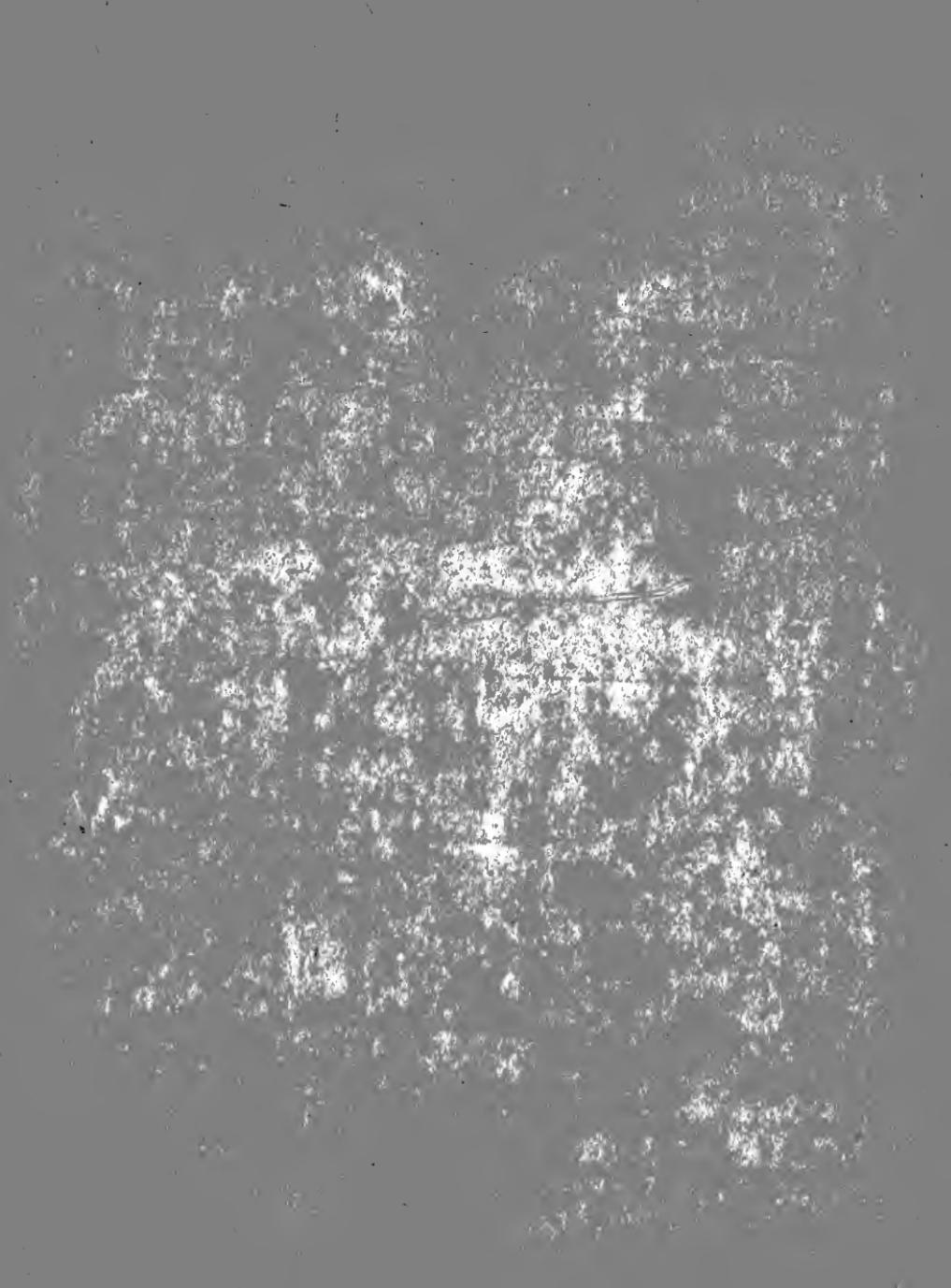


29 Parts

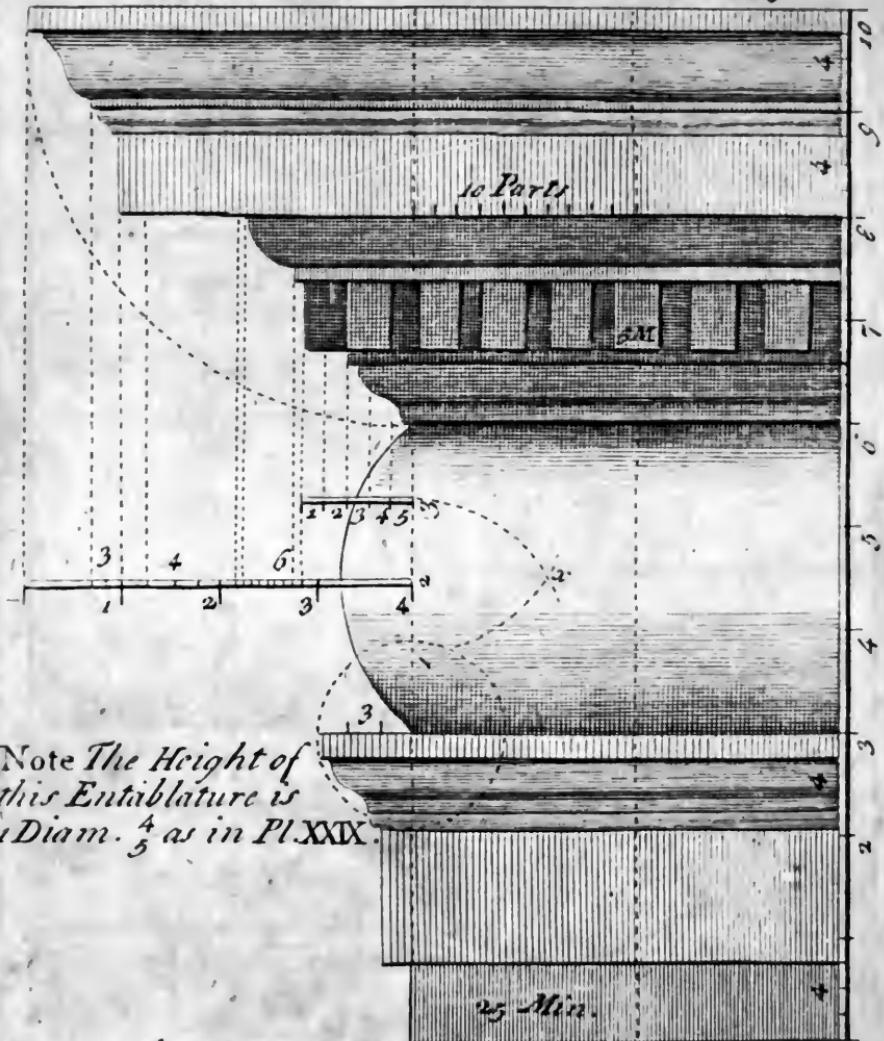


K



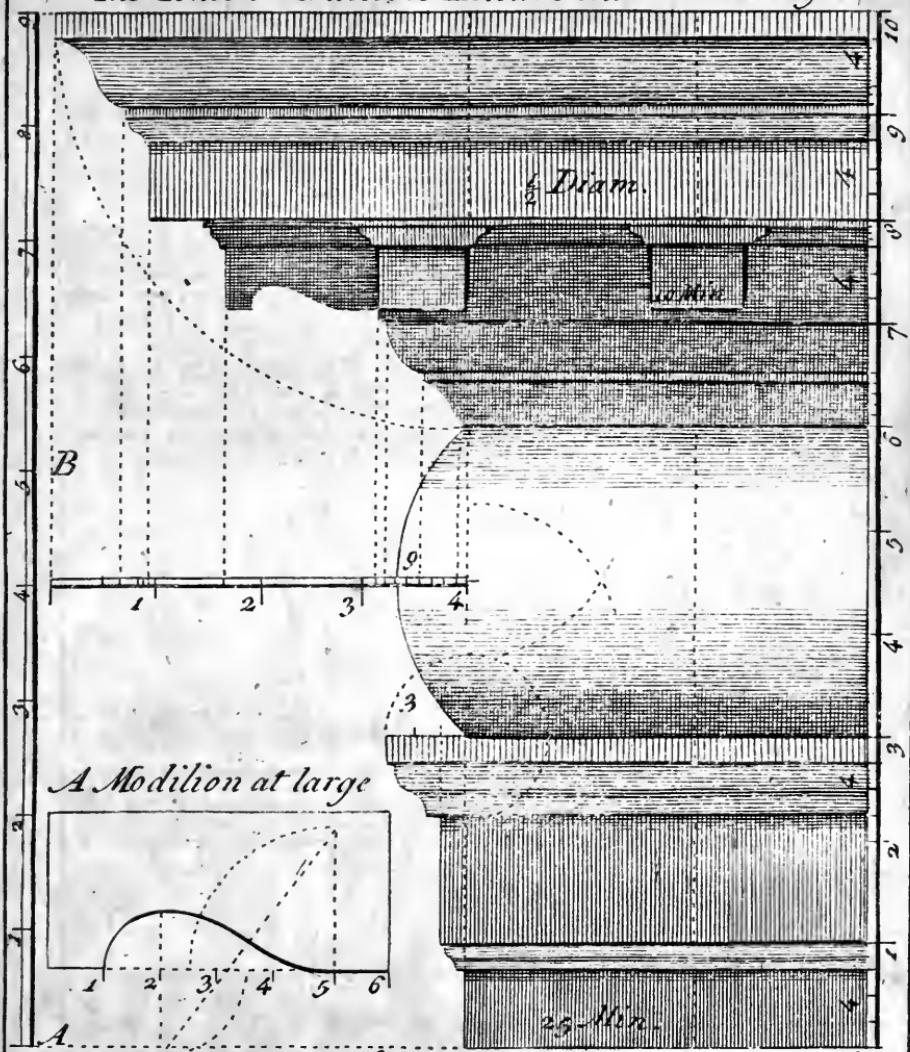


## The Ionick Dentile Entablature Pl. 28



Note The Height of  
this Entablature is  
1 Diam.  $\frac{4}{3}$  as in Pl. XXIX.

The Ionick Modillion Entablature Pl. 29

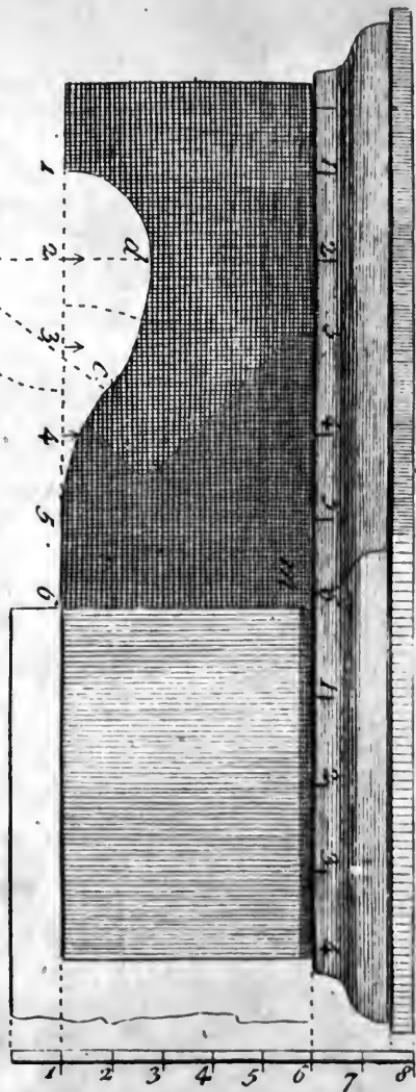


Note Five ninths of the Entablature's Height as B.A. is equal to the Diam. of the Column. B.L. Invent

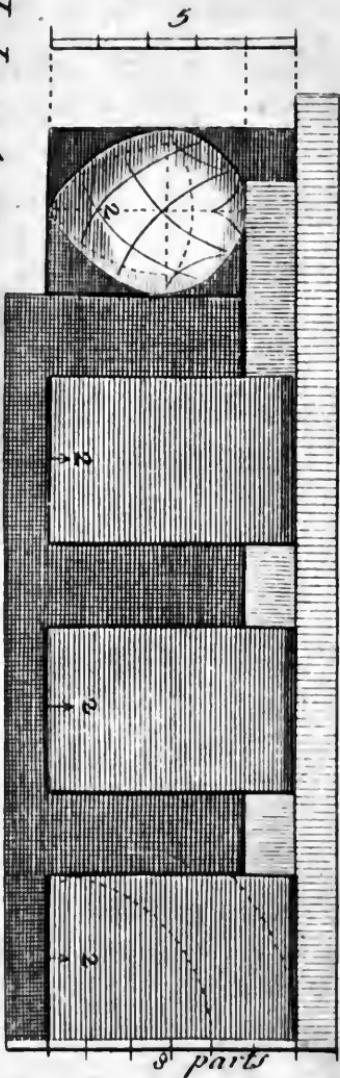




*Ionick Motion at large*



*Ionick Dentures at large*



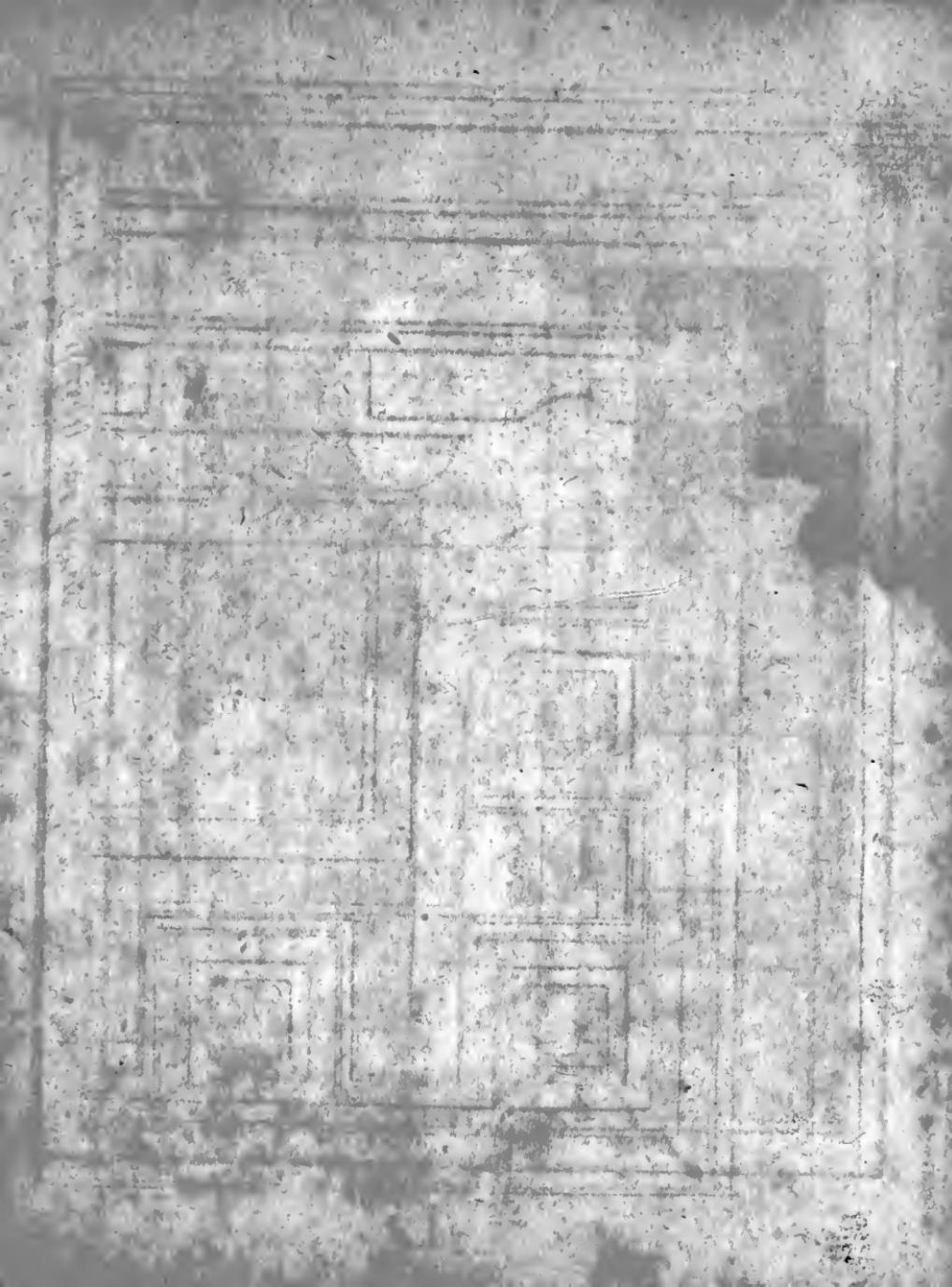
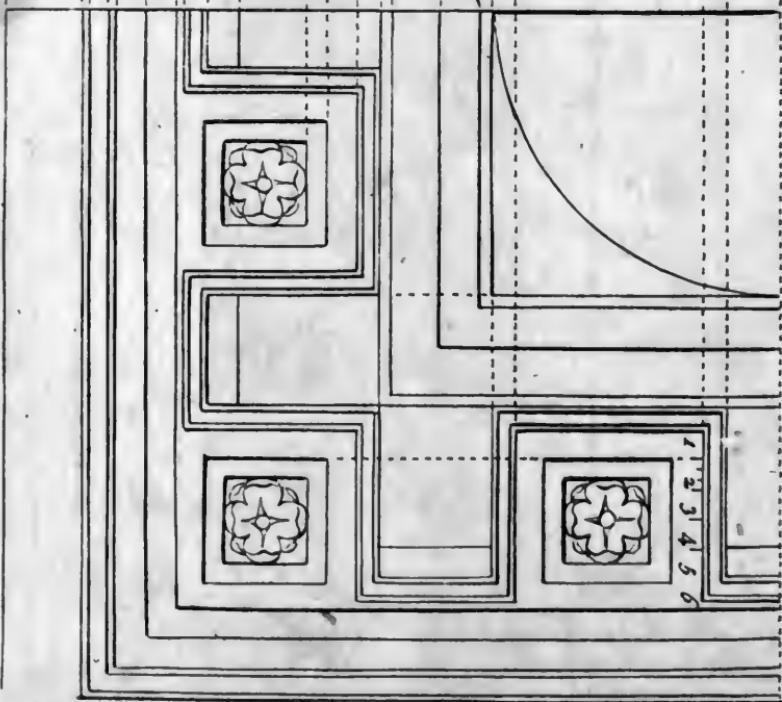
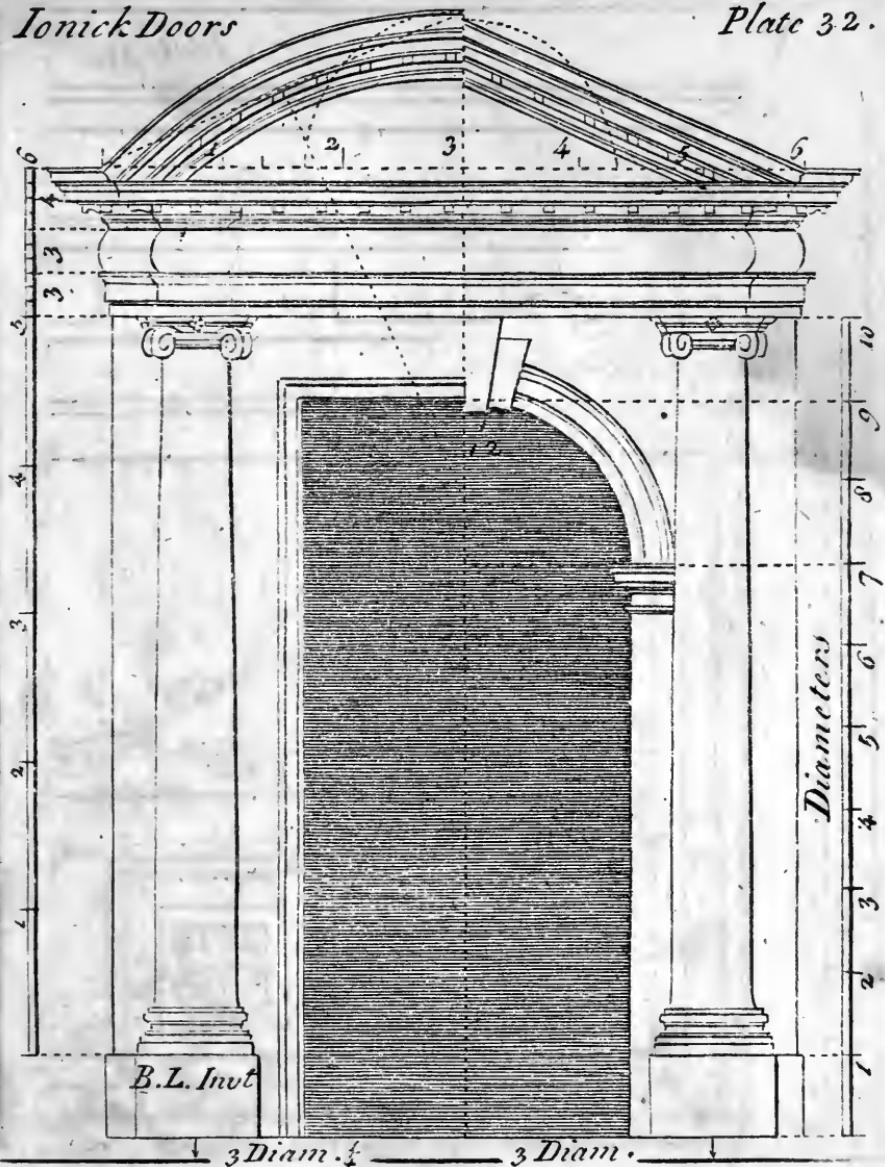


Plate 31.

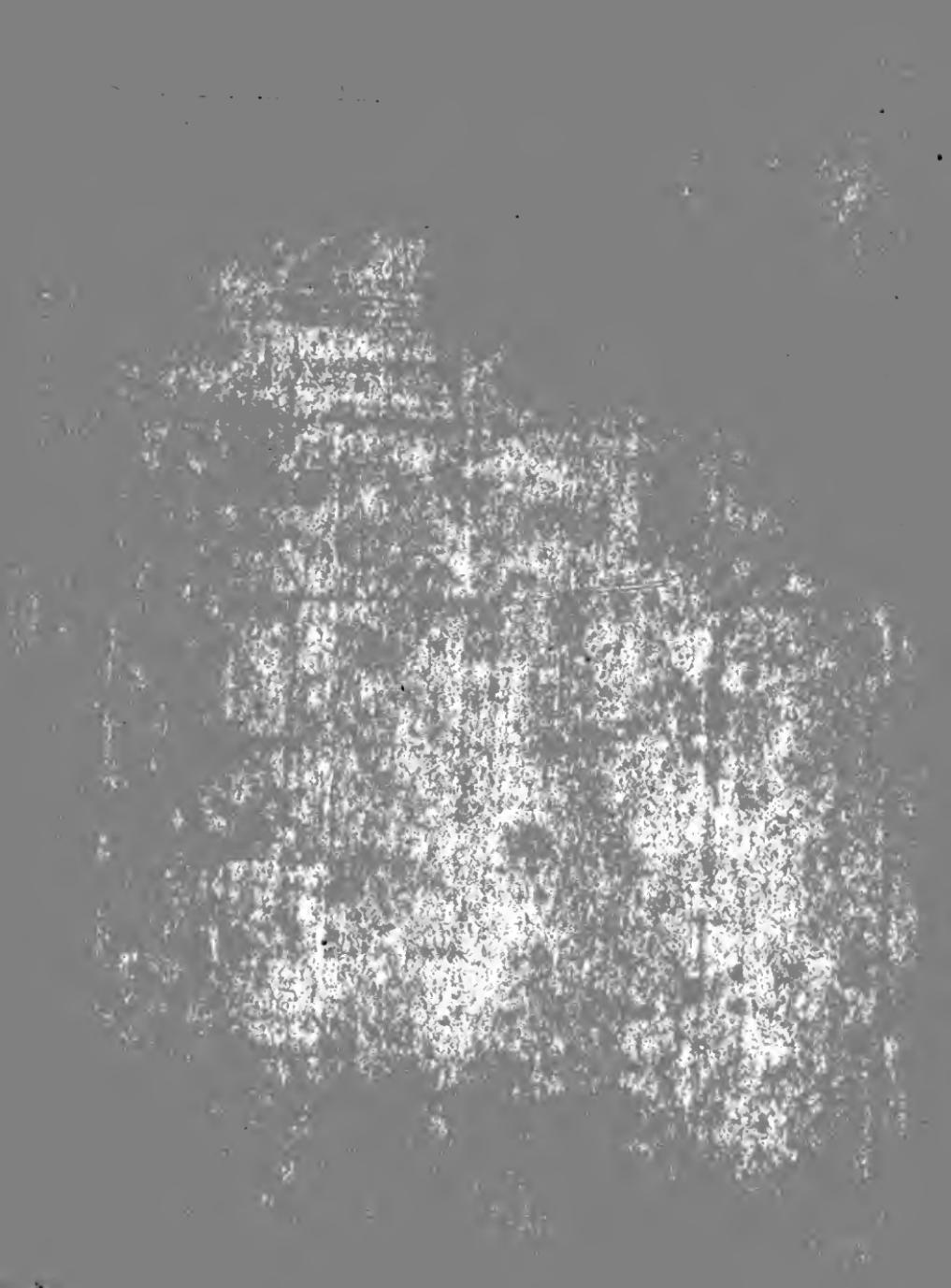
*The Planee of the Ionick  
Entablature at an External Angle*



L

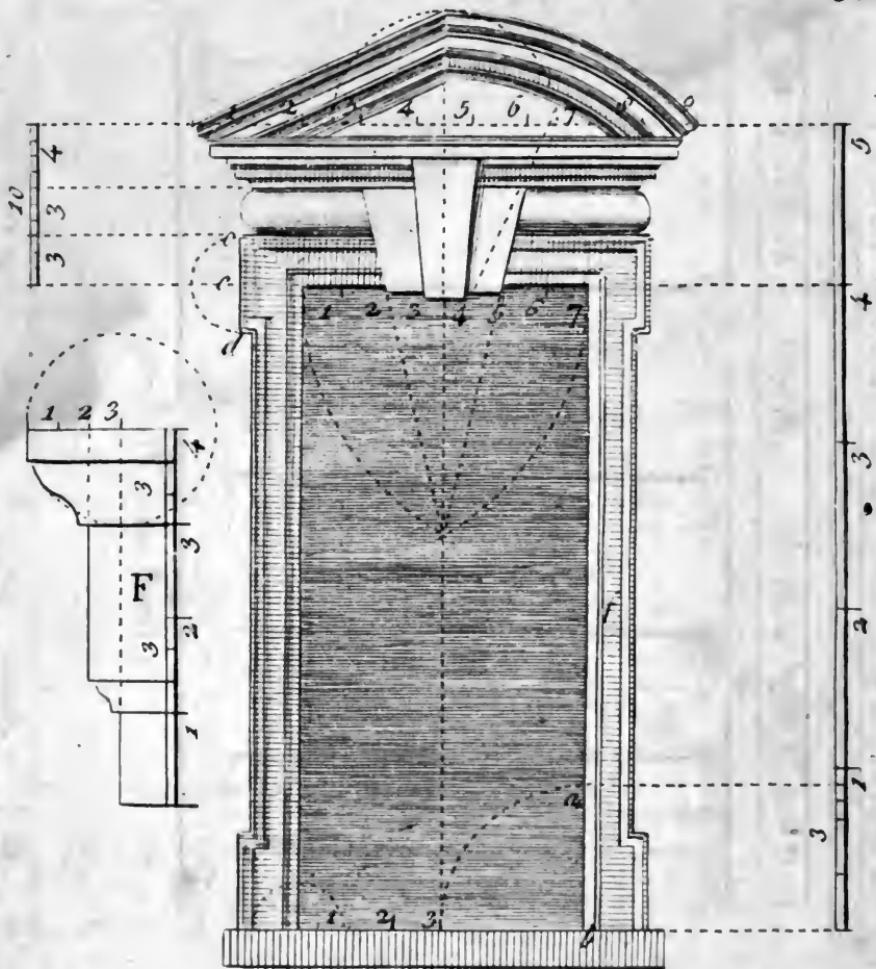






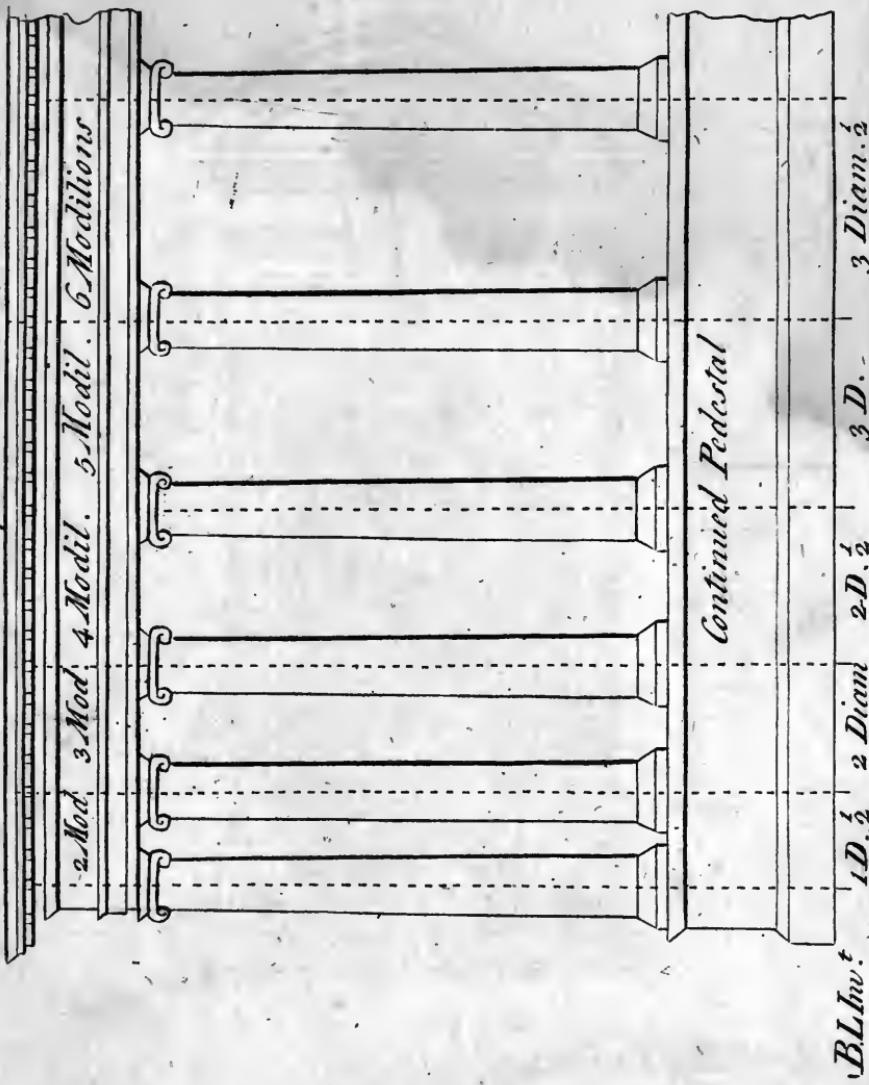
Jonick Windon

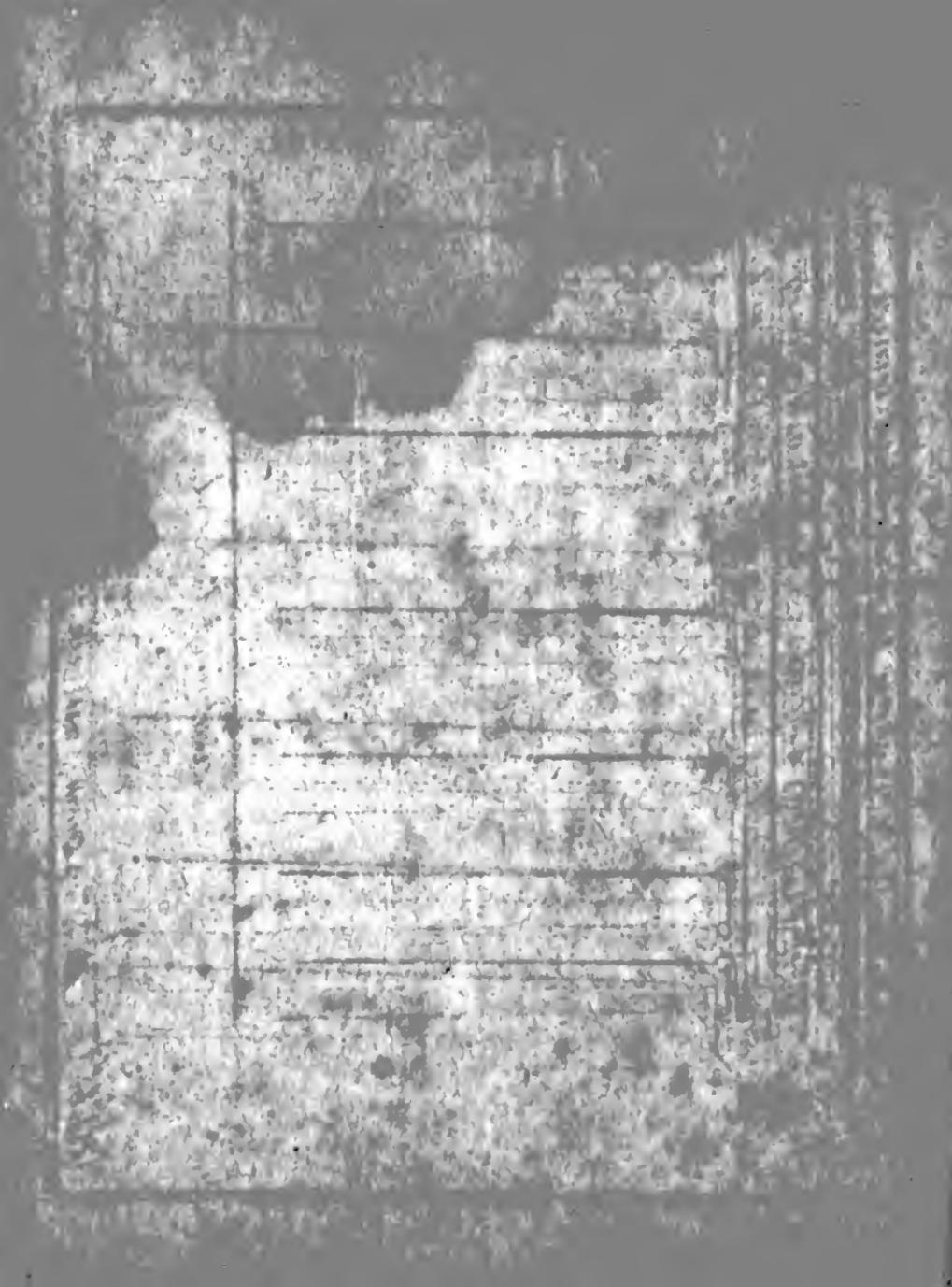
Plate 33.



B. Langley Invent.

*Ionick Intercoloniations for a Modillion Cornice.*





*Ionick Interruptions for a Dentule Cornice*

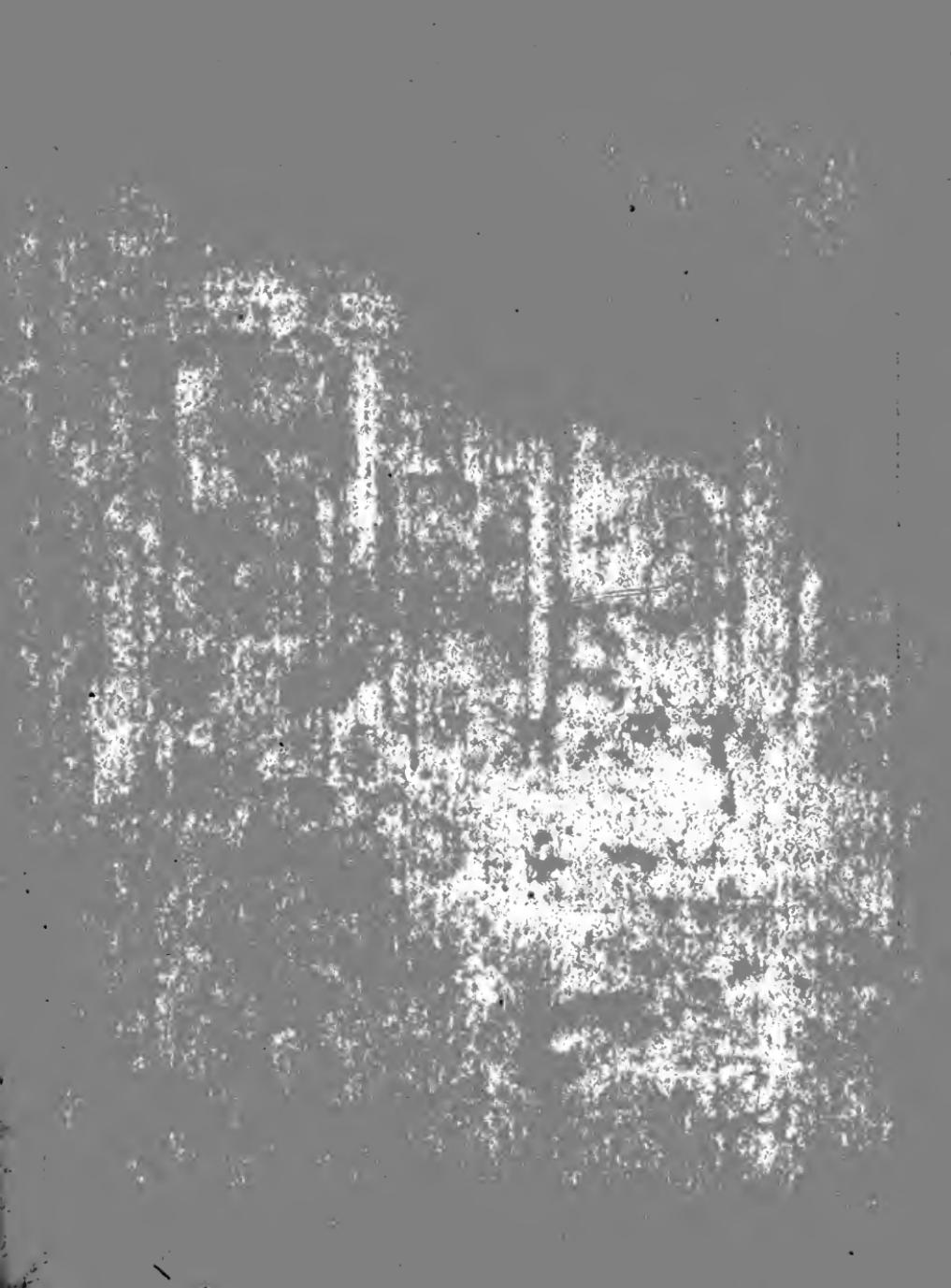
*Pl. 35.*

*12 Den 10 Dent 20 Dent 25 Dentules*  
*Divide each Semidiameter in 12 give 2 a Dentule & 4 to an Interval*

*B Langle 1D.  $\frac{1}{2}$  2 Diam.  $\frac{1}{2}$  3 Diameters.*  
*Inv. 1*

*M*



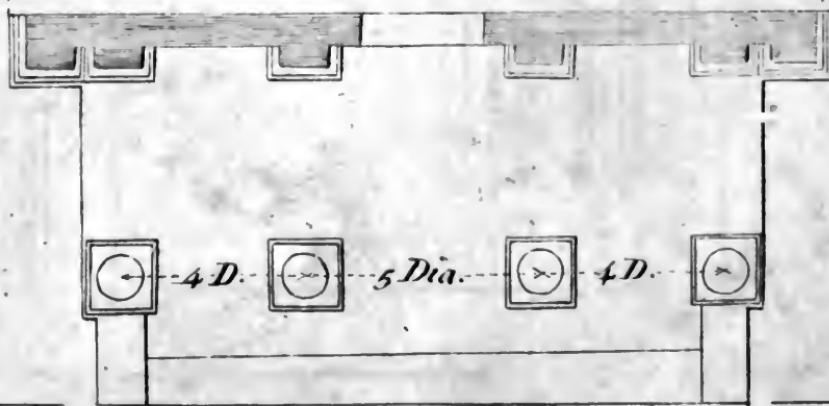
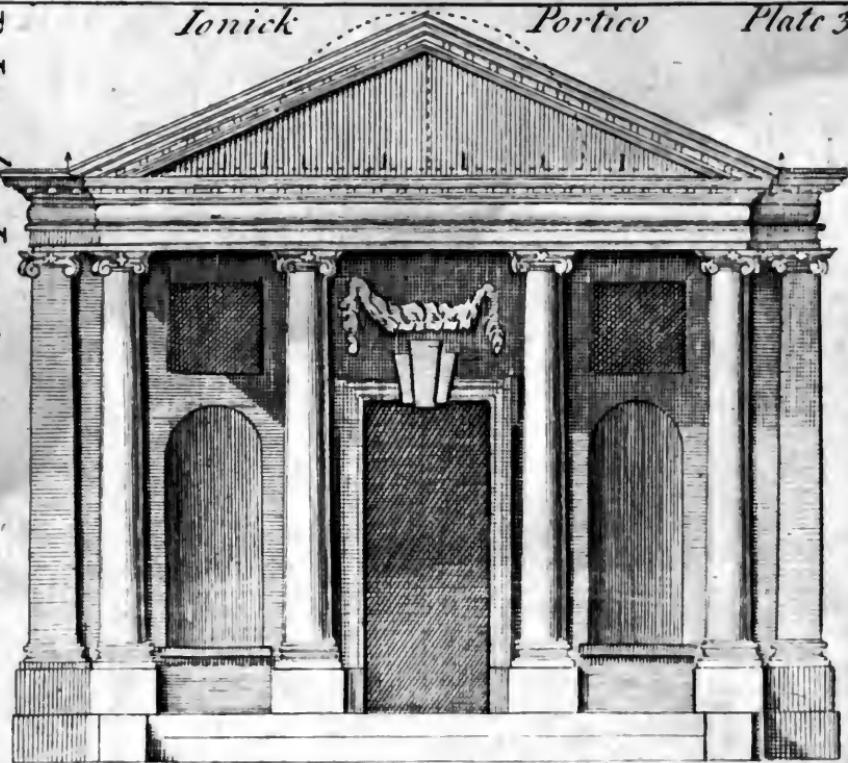


Ionick

Portico

Plate 30

B. Langley Invent.



Lovick Arches & Imposts

16 Modillions.

13 Modillions.



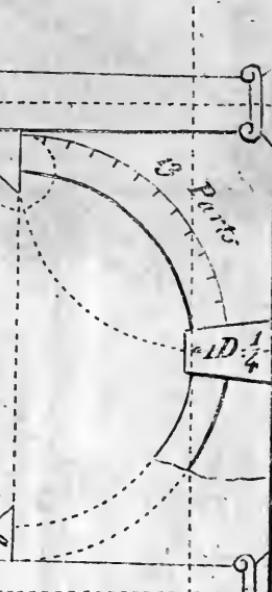
part



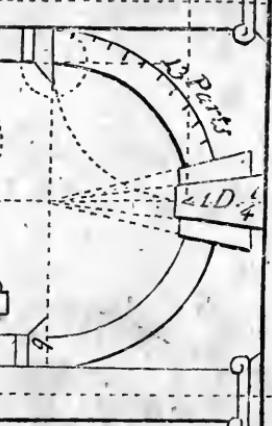
part



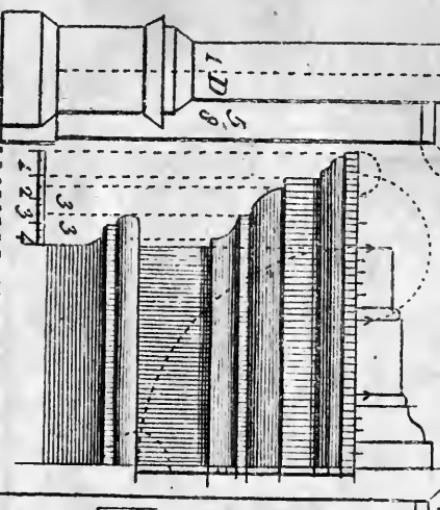
part



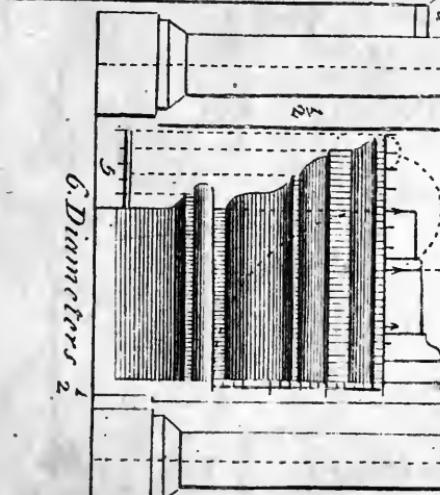
part



part



part



part

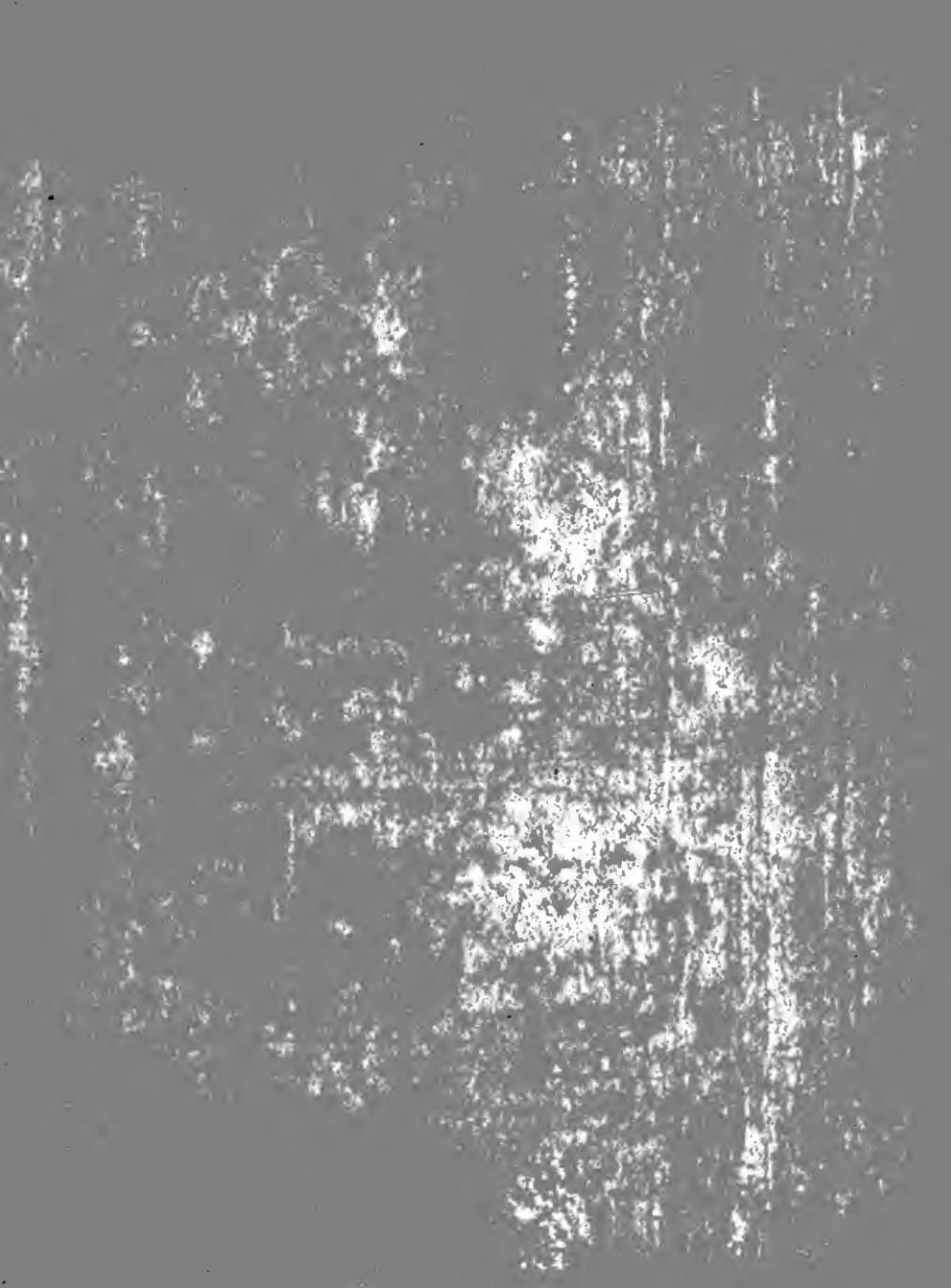
6. Diameters 2'

PL. 37.

5 Diam. 3'

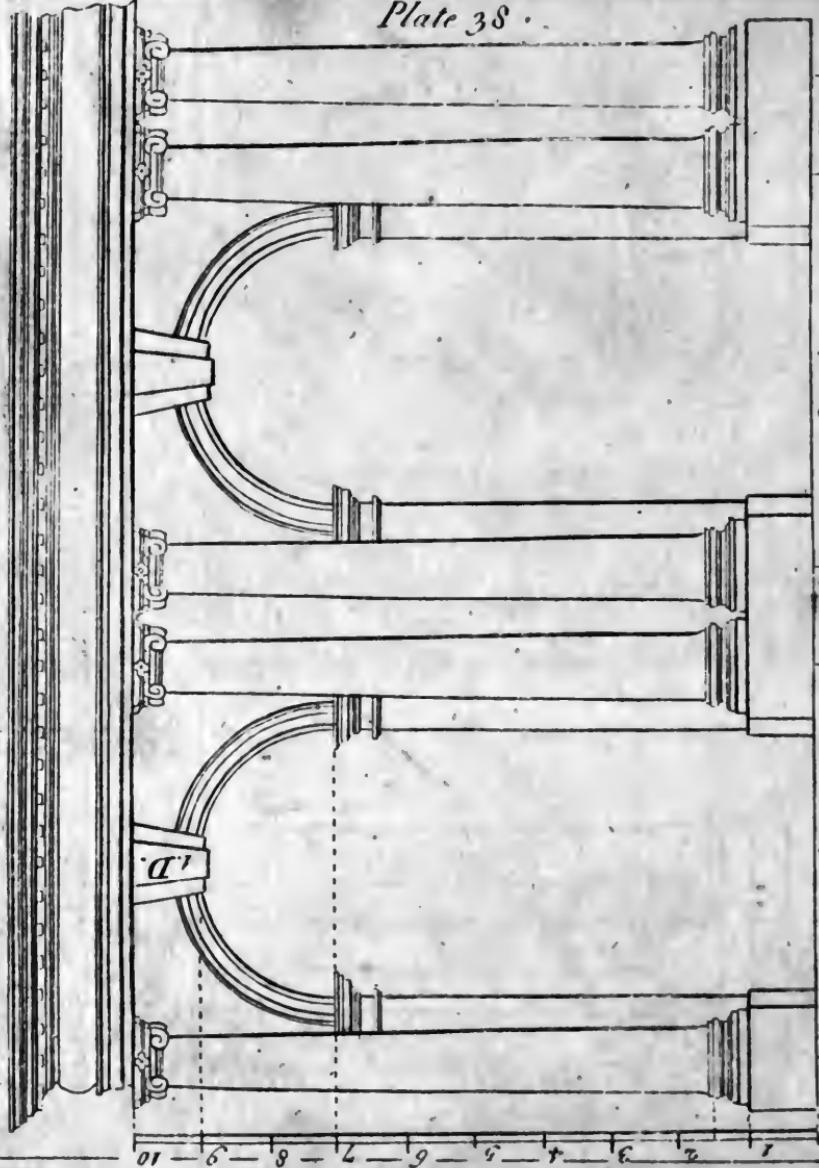
B. Langley Inv





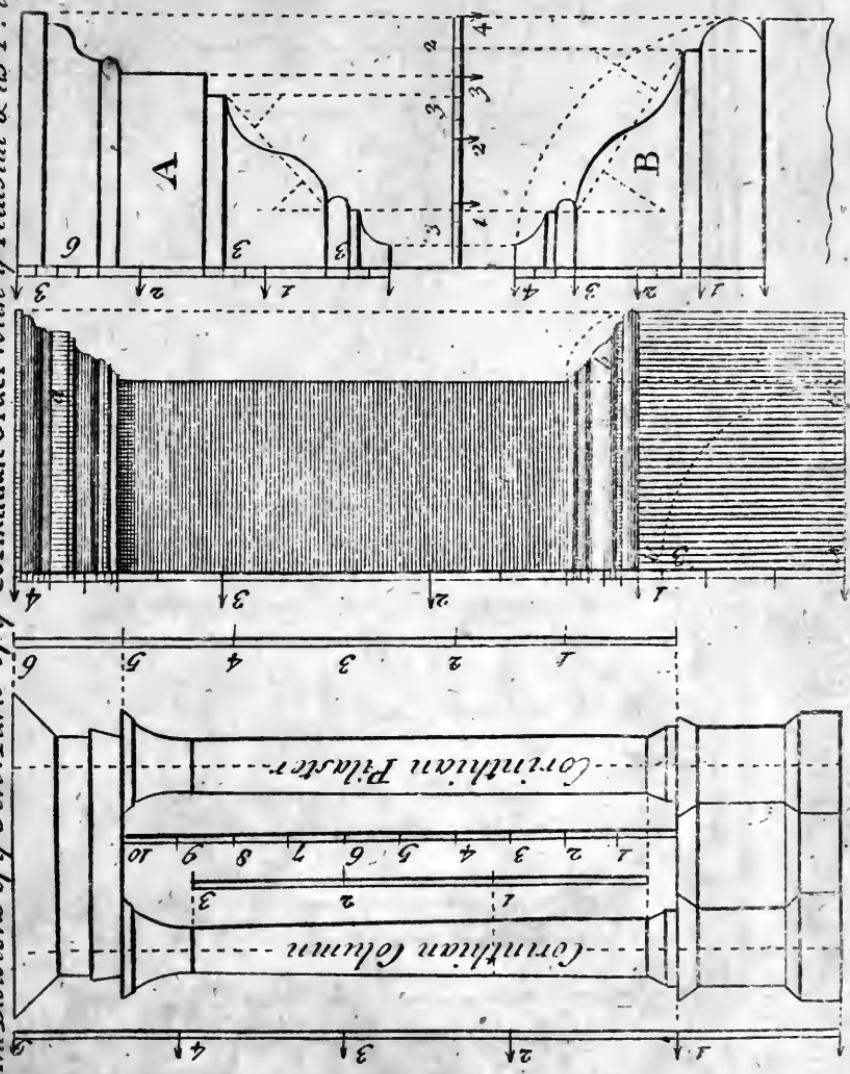
*Ionick Arcades*

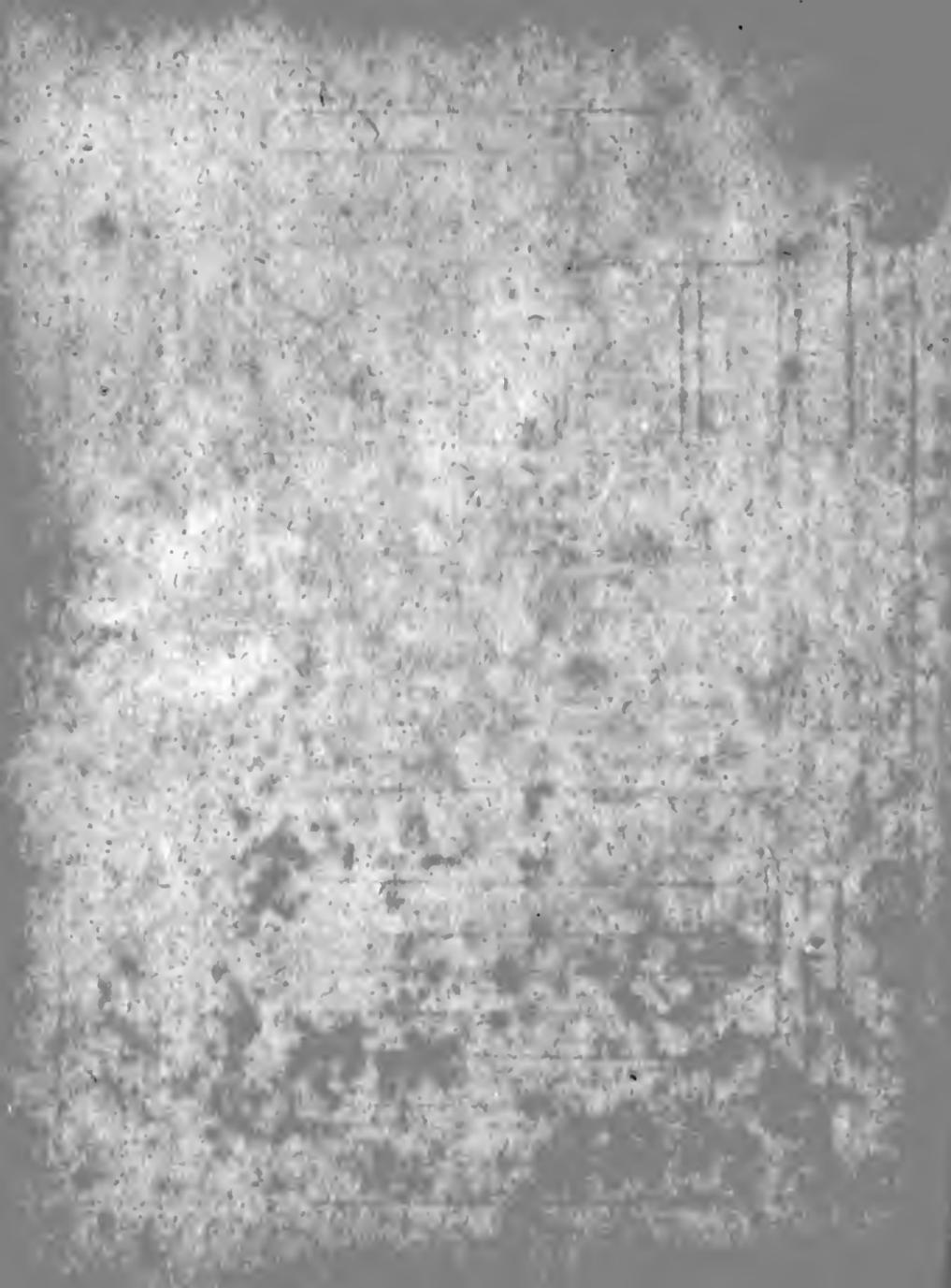
Plate 38.

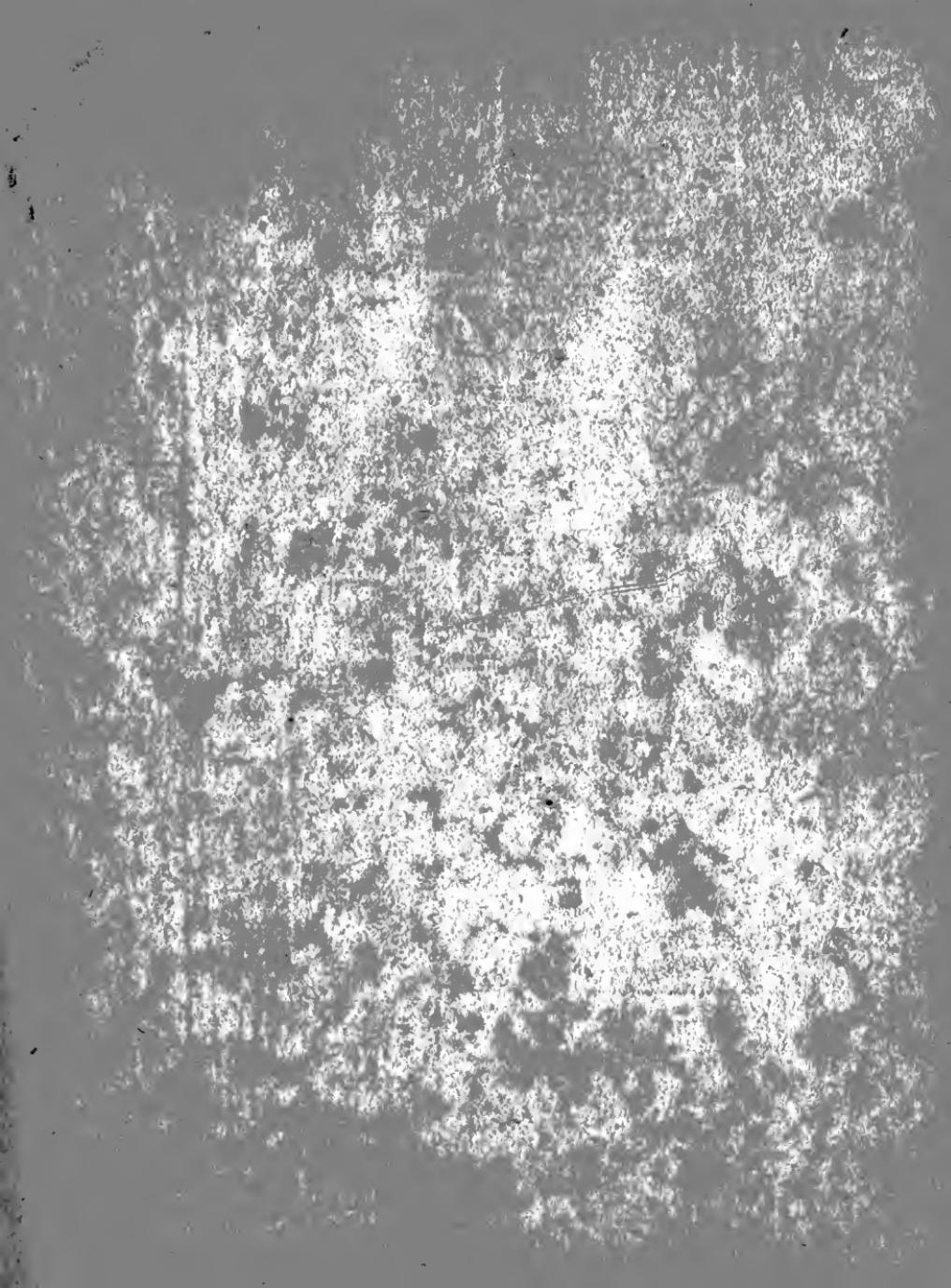


6 Diam  $\downarrow$   $D_2$   $\downarrow$  6 Diam.  $\downarrow$   $D_2$

### The Divisions of y Gen! Part of y Corinthian Order with its Pedestal & its P.C. at large







The various Kinds of Leaves for the Enrichment of Capital

Plate 40.



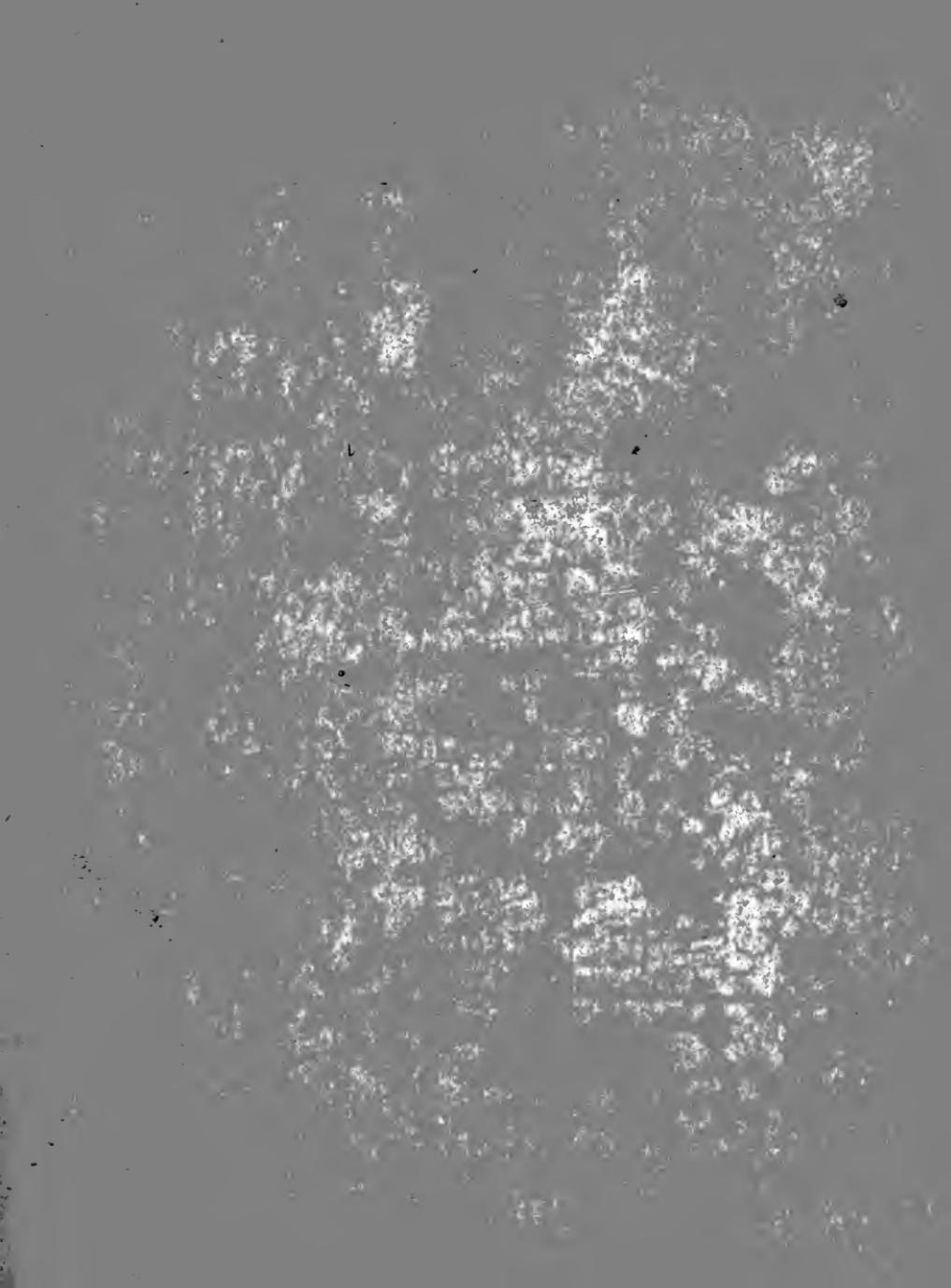
Acanthus

Laurel

Palm leaf

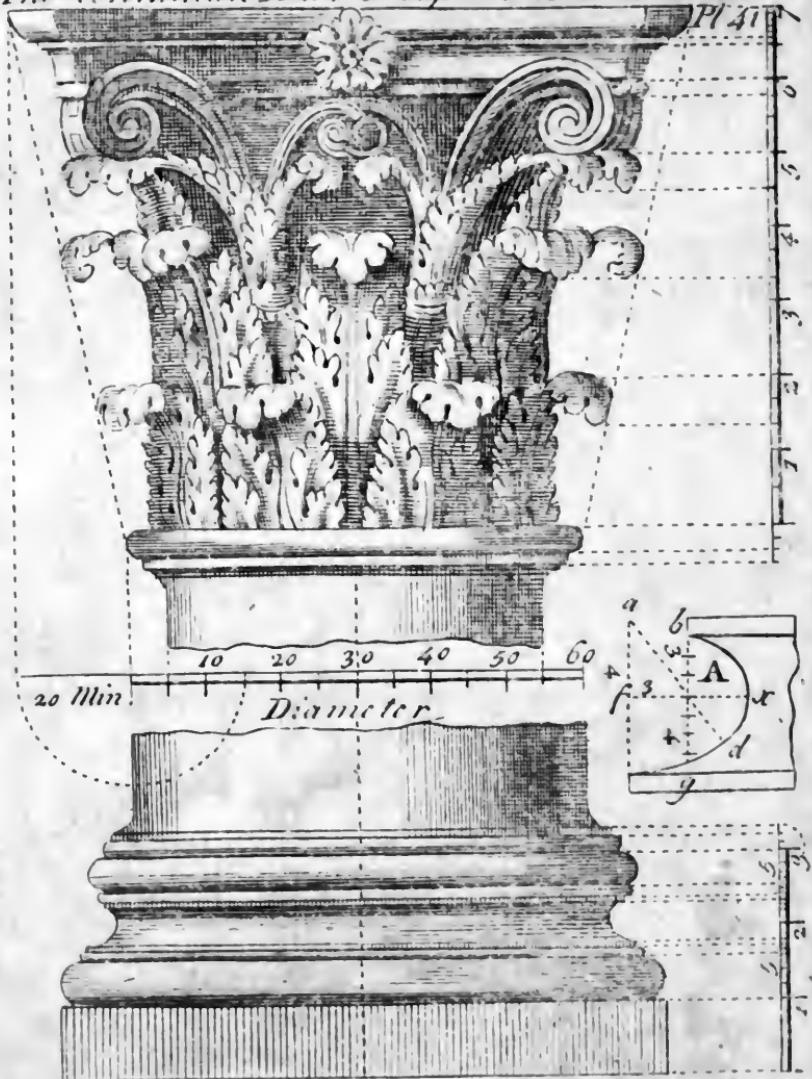
Laurel

olive



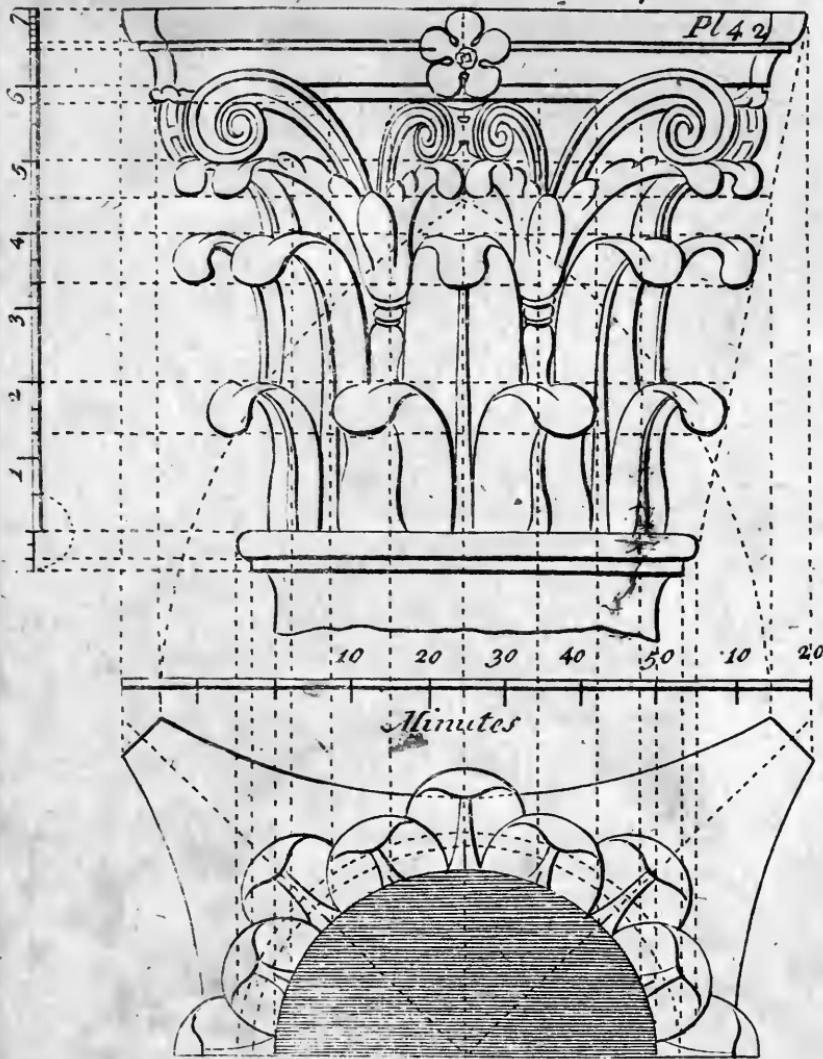
*The Corinthian Base & Capital to a Column*

Pl 41



*The Corinthian Capital with its Plan for a Column*

Pl 42

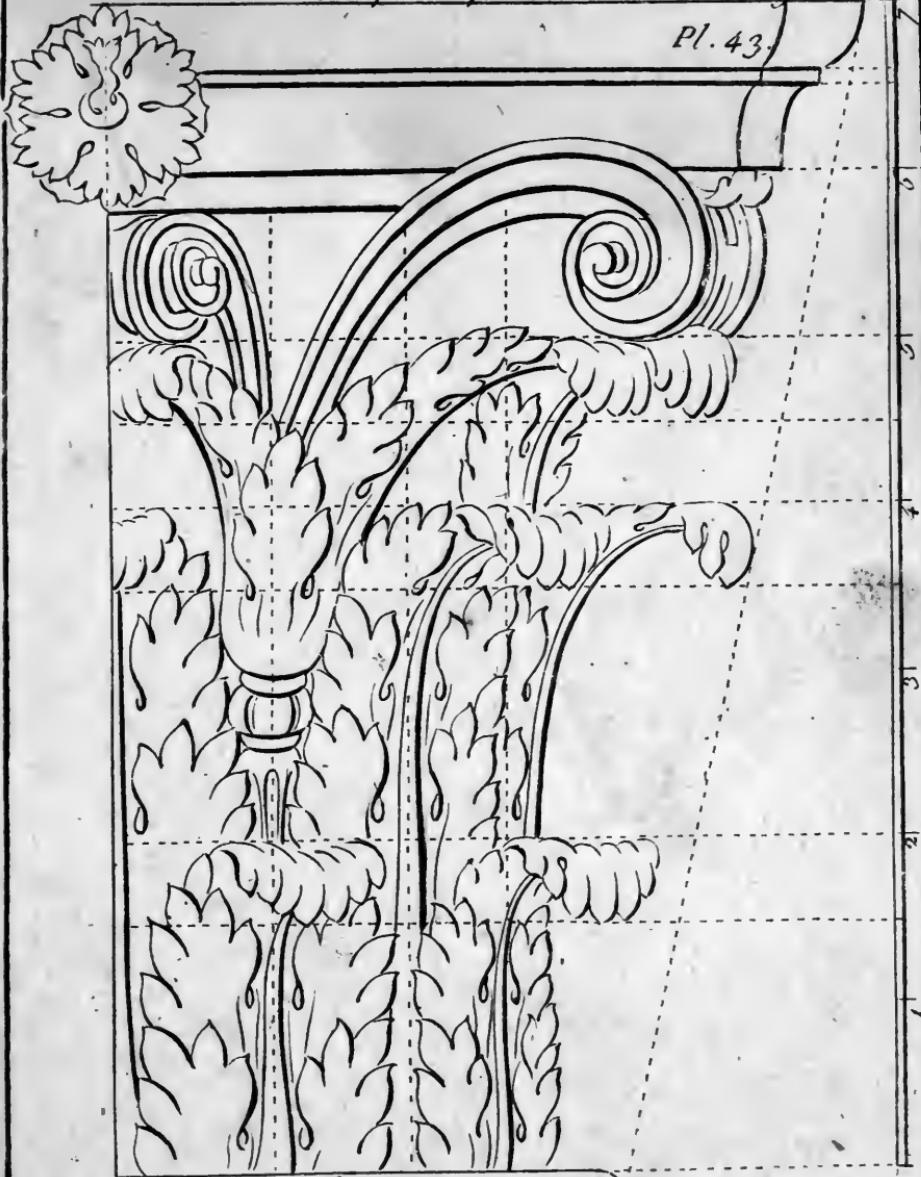


*Batty Langley Invent.*



*Corinthian Capital for a Column at large.*

Pl. 43.



B. Langley Inv.

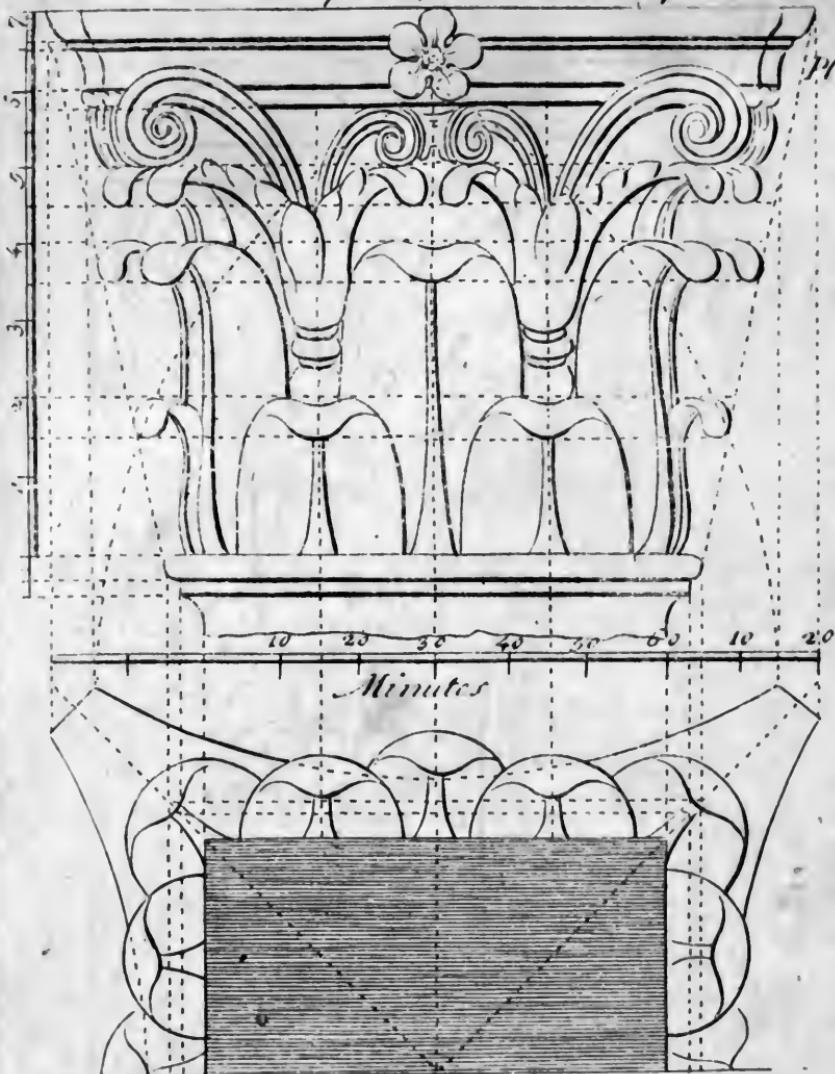
P





*The Corinthian Capital, with its Plan for a Pilaster*

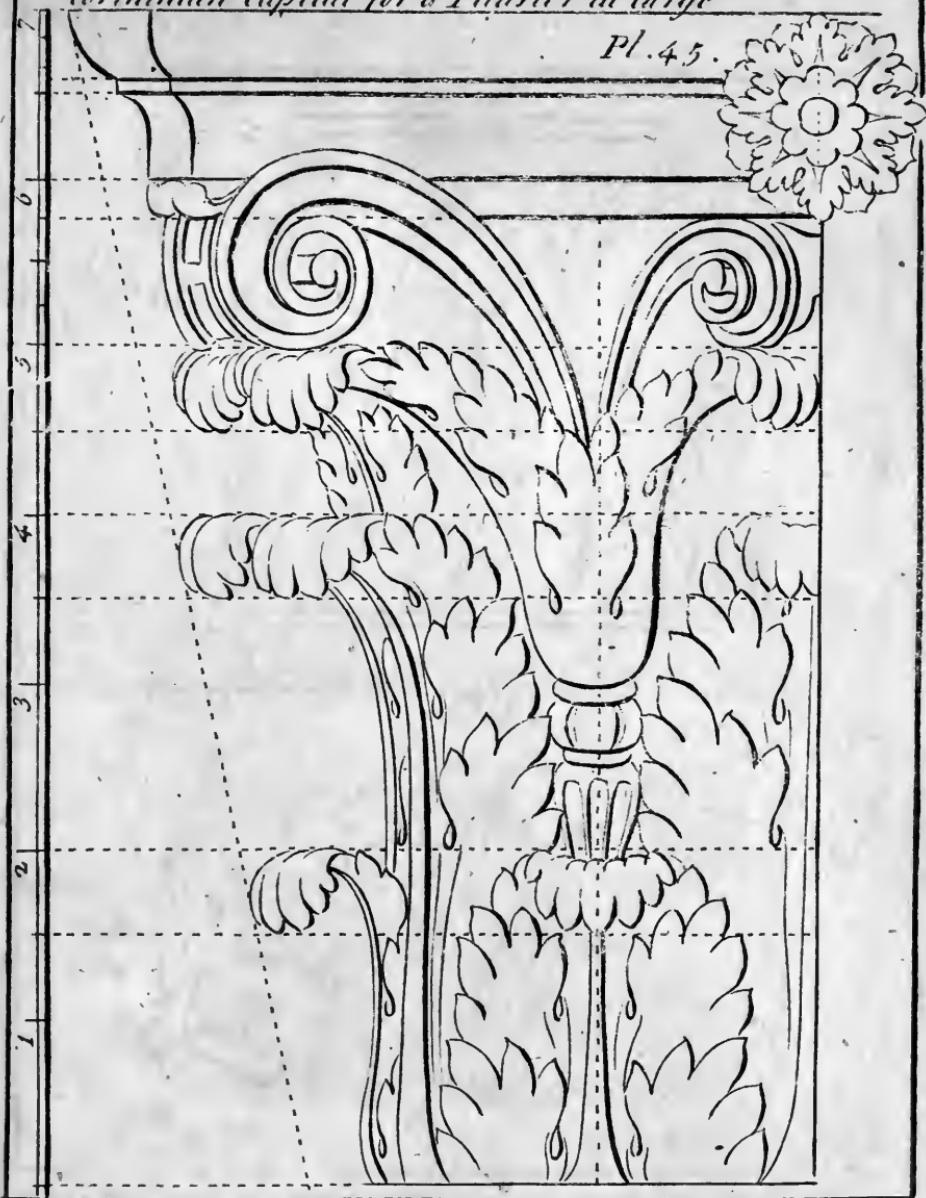
Pl. 44

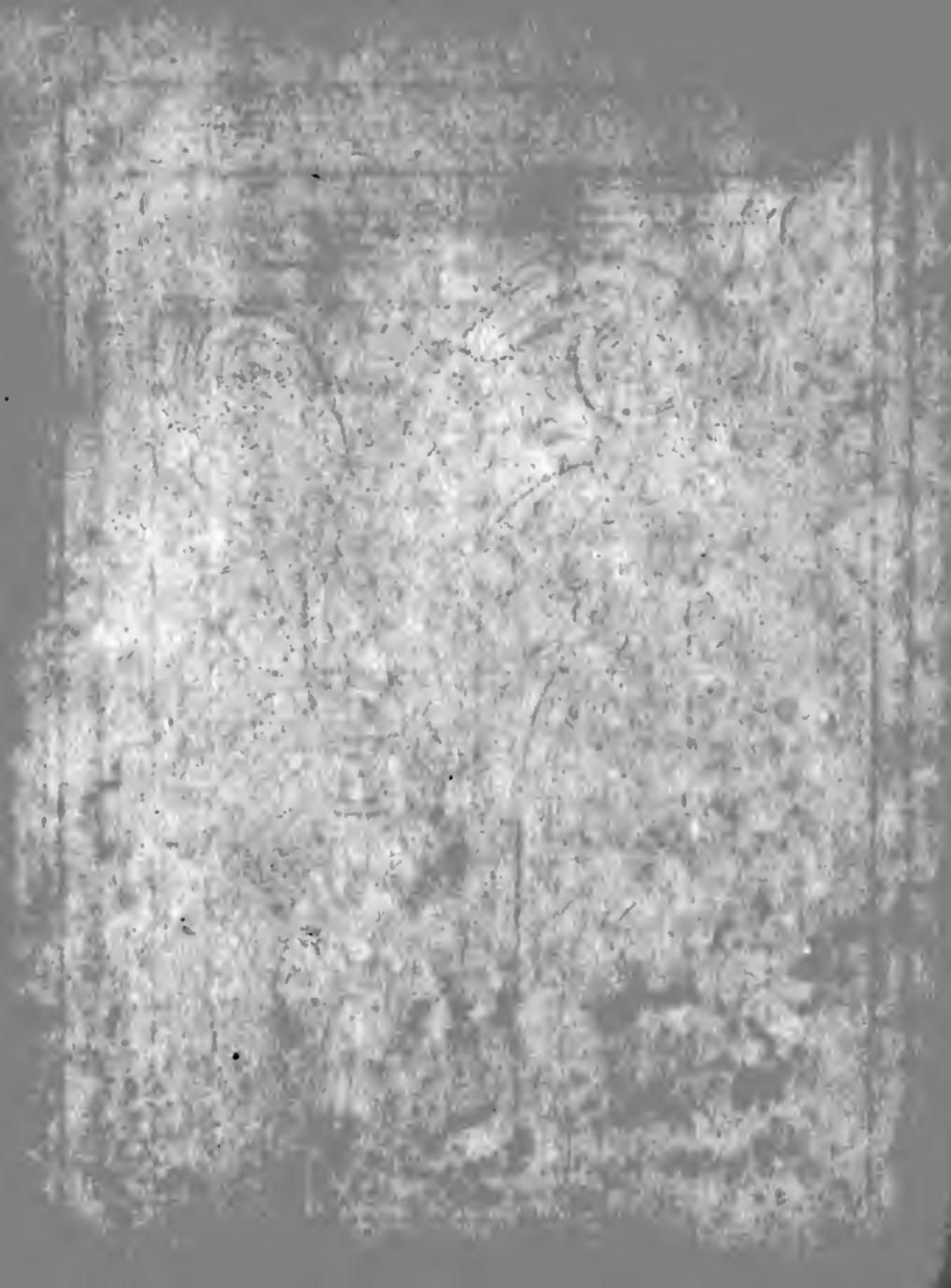


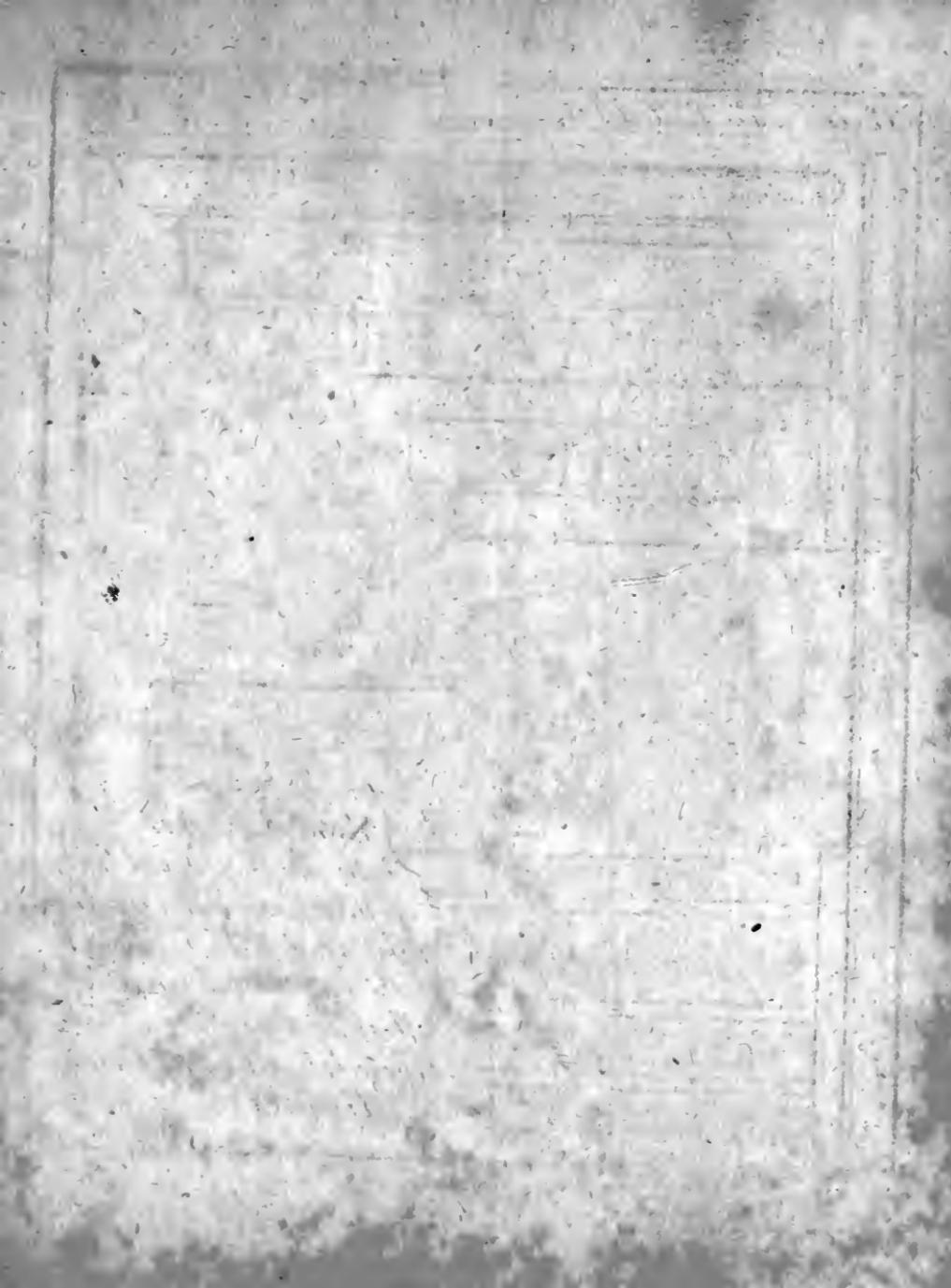
*Batty Langley Inv't.*

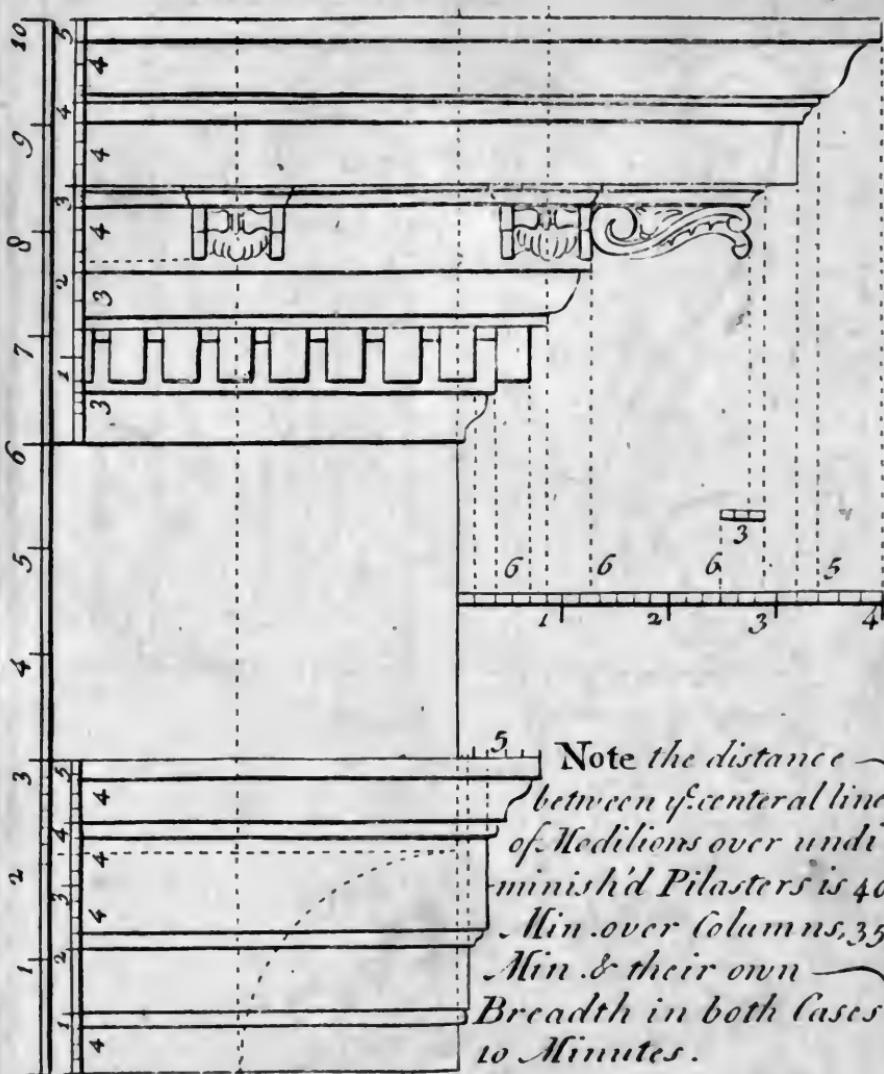
*Corinthian Capital for a Pilaster at large*

Pl. 45.





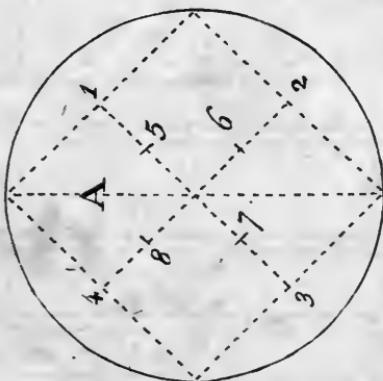
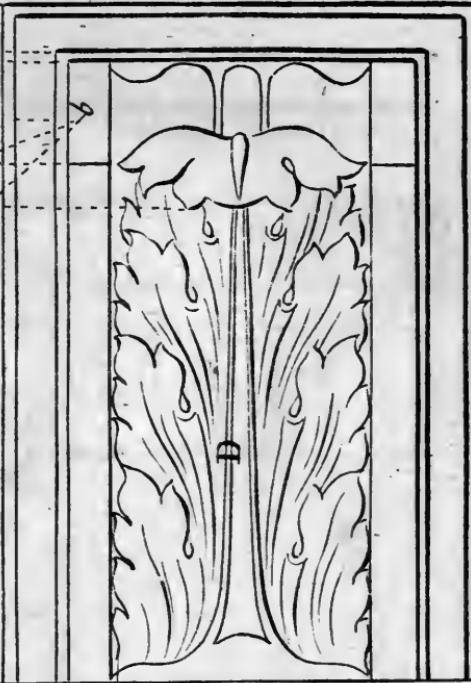
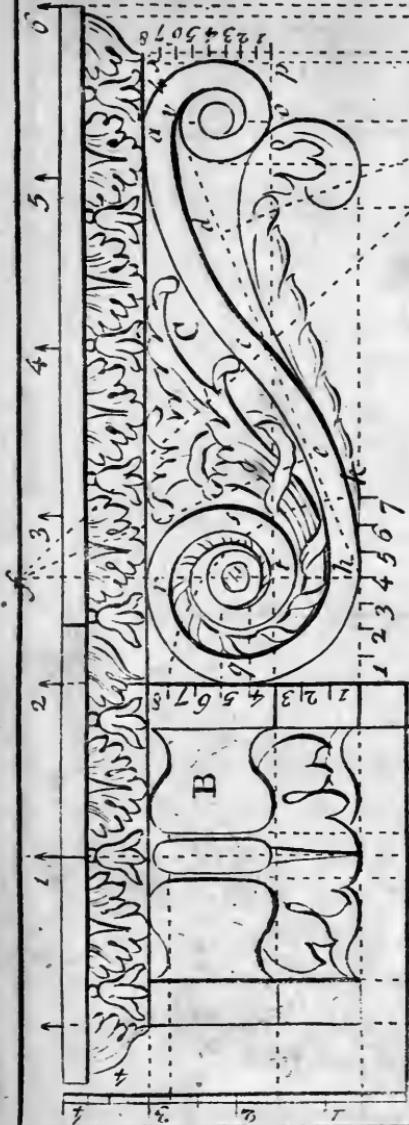


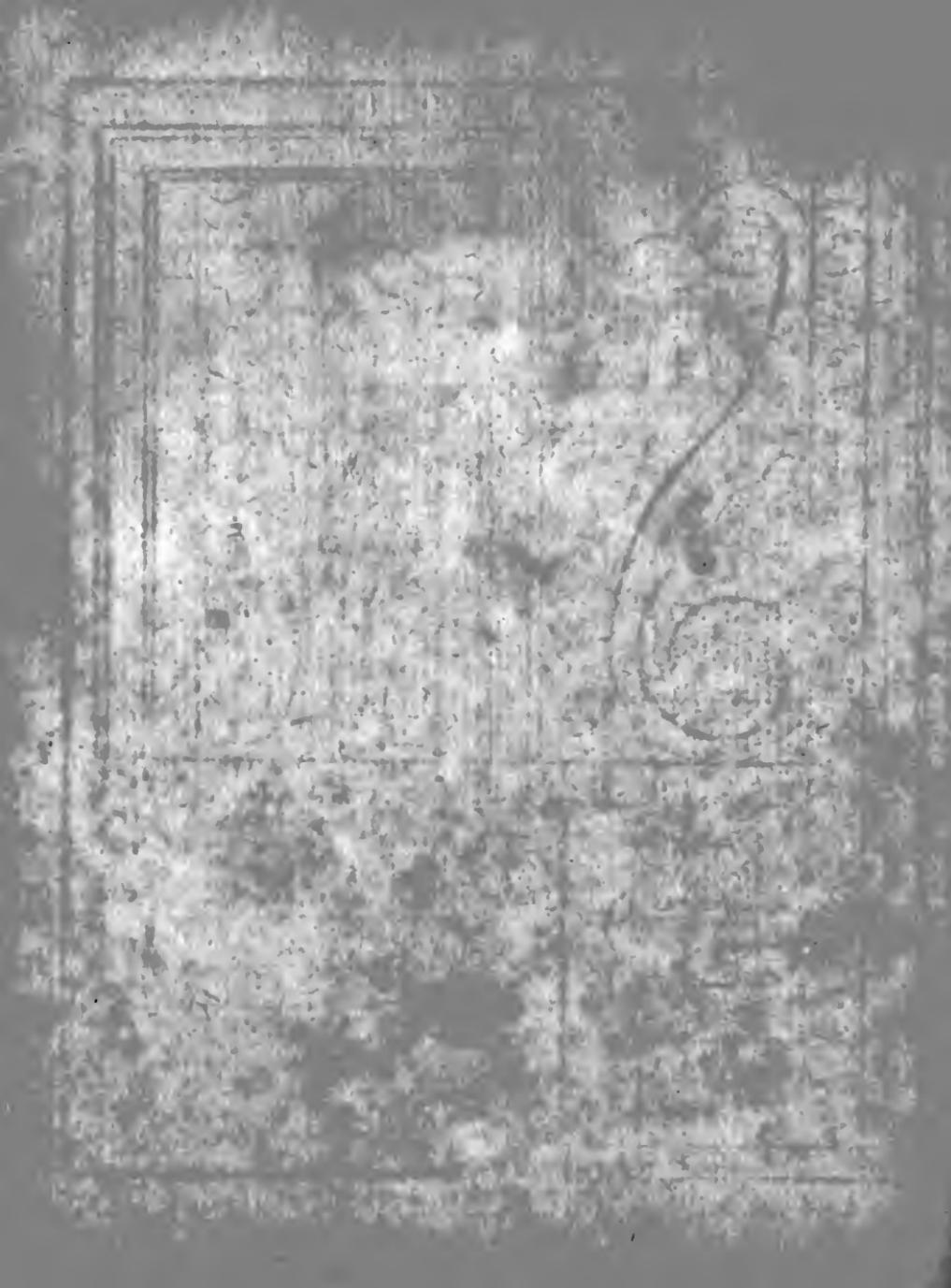


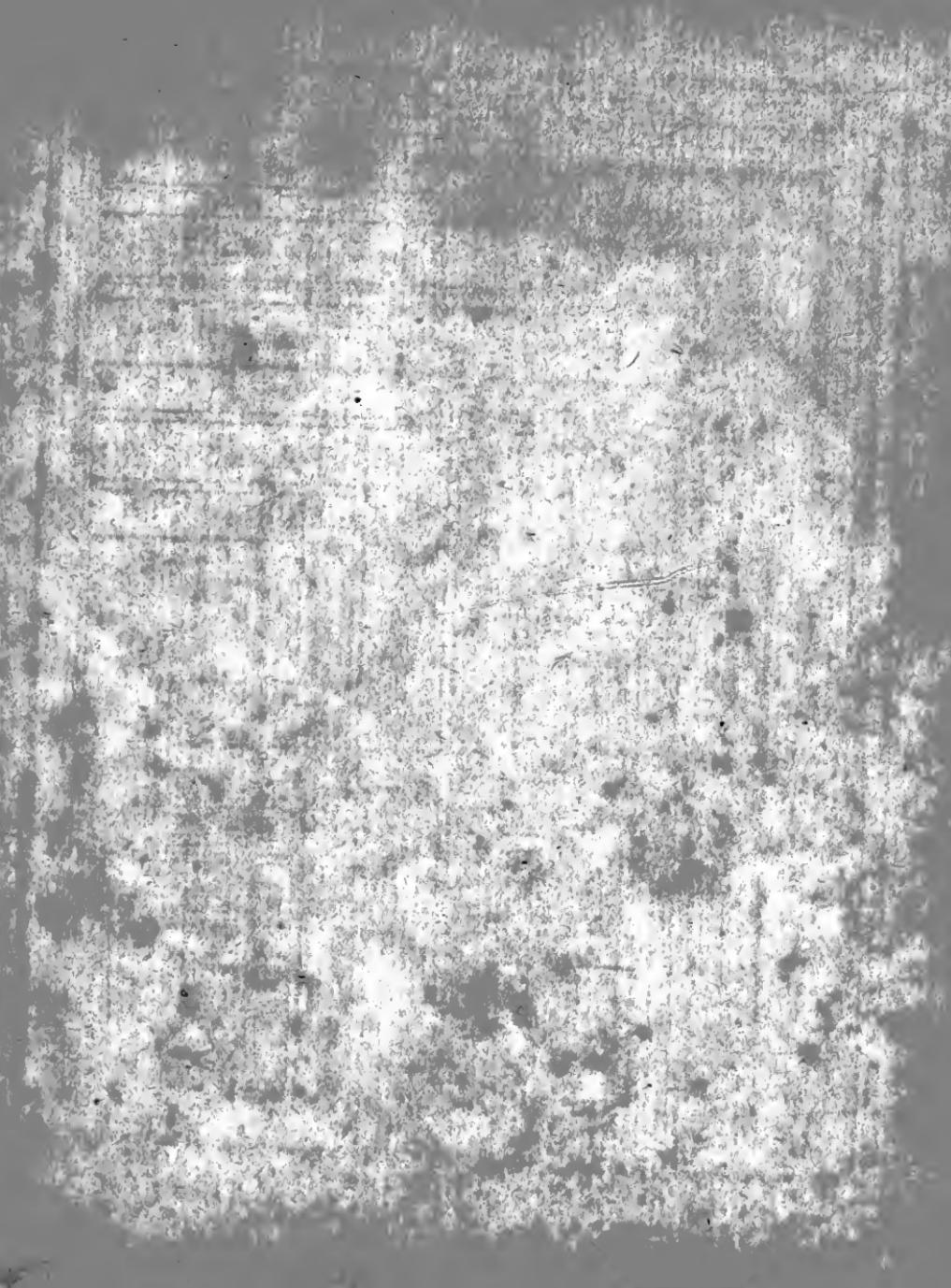
25 Min.

Note the distance ~  
between the central lines  
of Modillions over undi-  
minish'd Pilasters is 40  
Min. over Columns 35  
Min. & their own ~  
Breadth in both cases  
10 Minutes.

The Corinthian Modillion explain'd Plate 47.

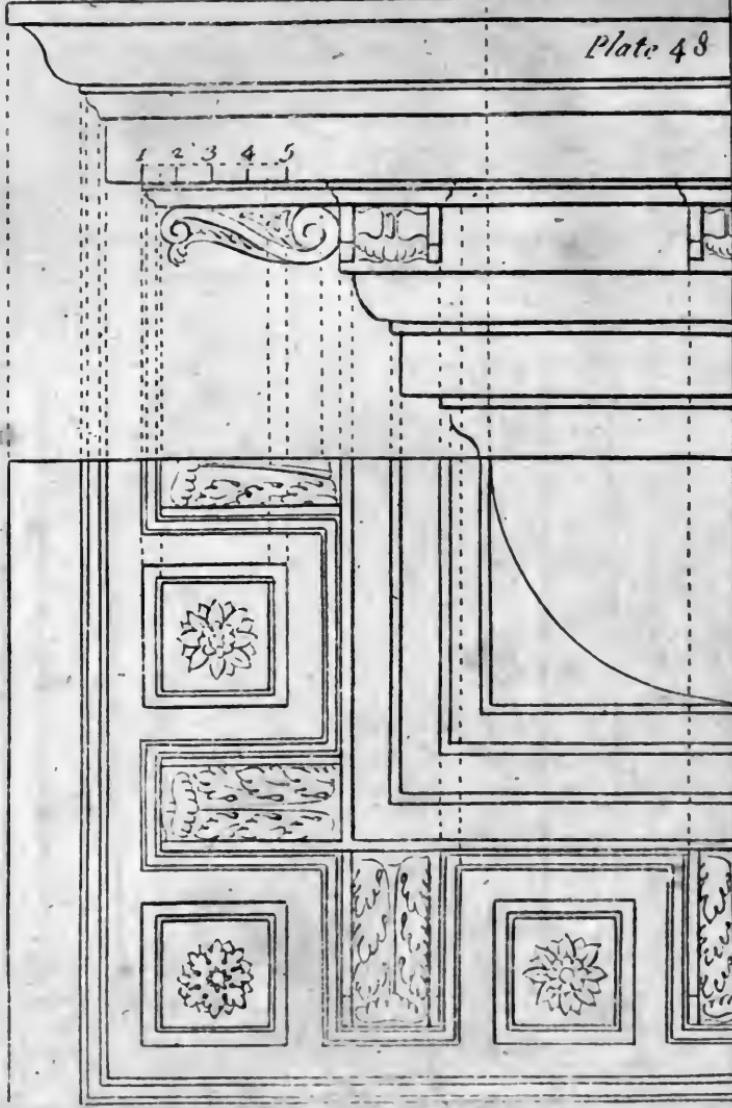






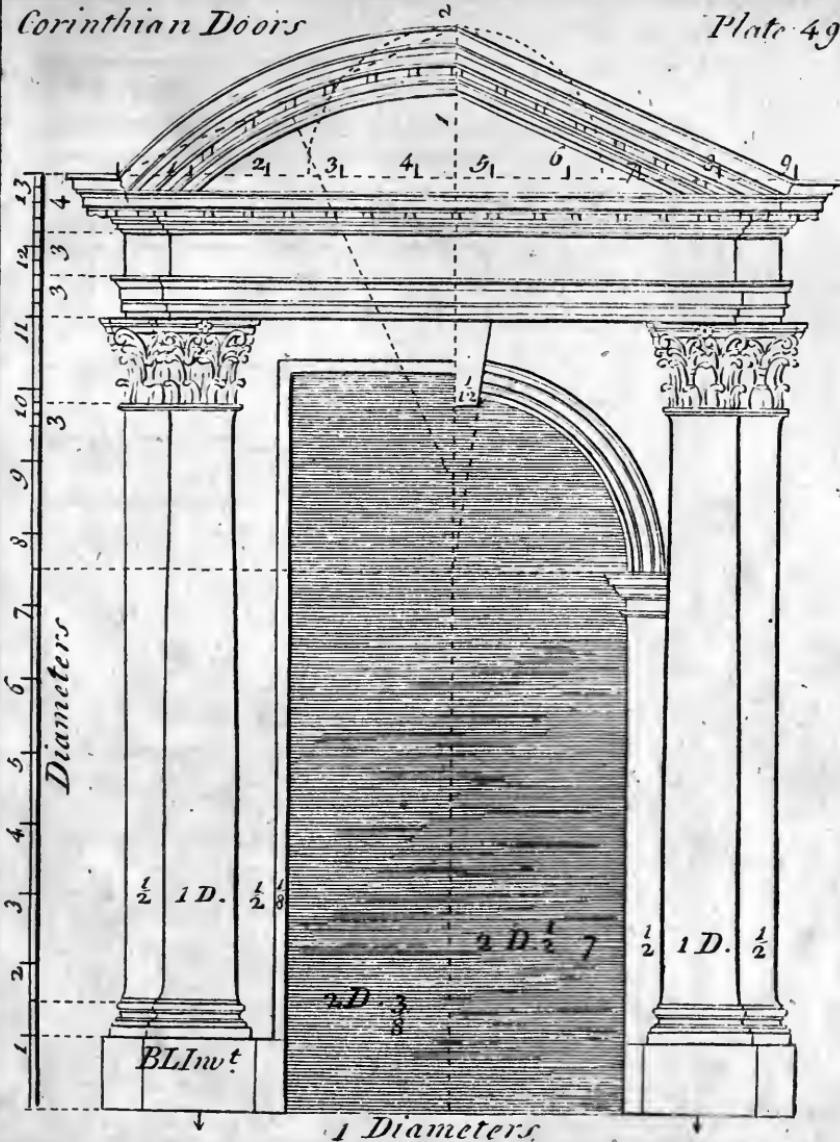
*The Return of the Corinthian Plinche explained*

Plate 48



## *Corinthian Doors*

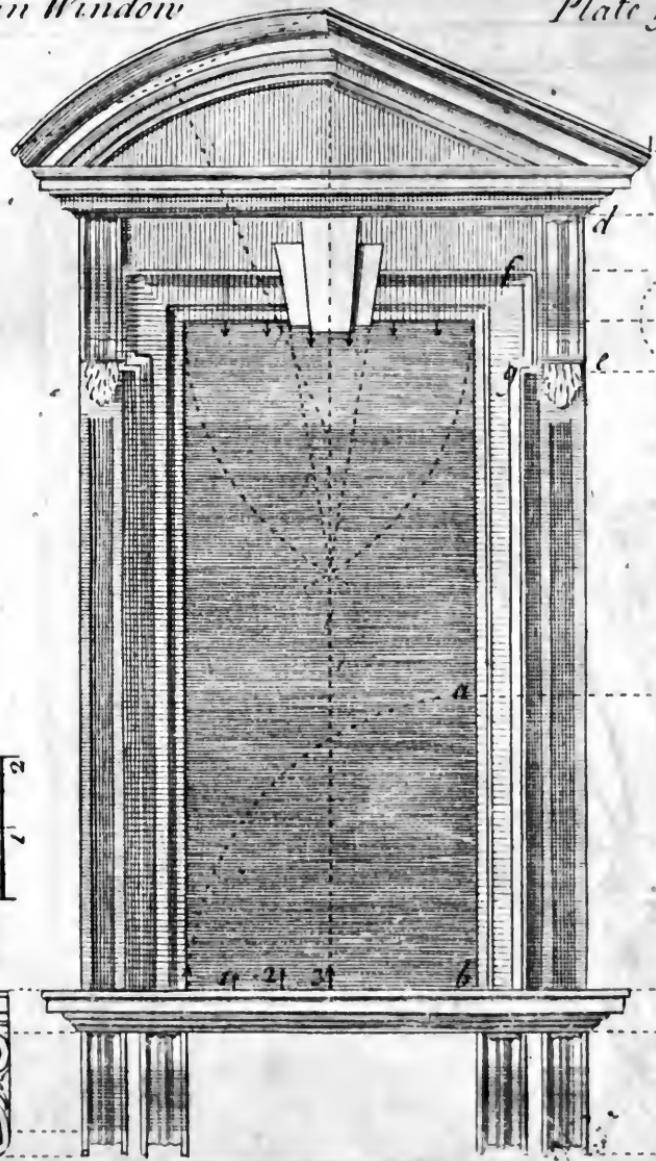
Plate 49



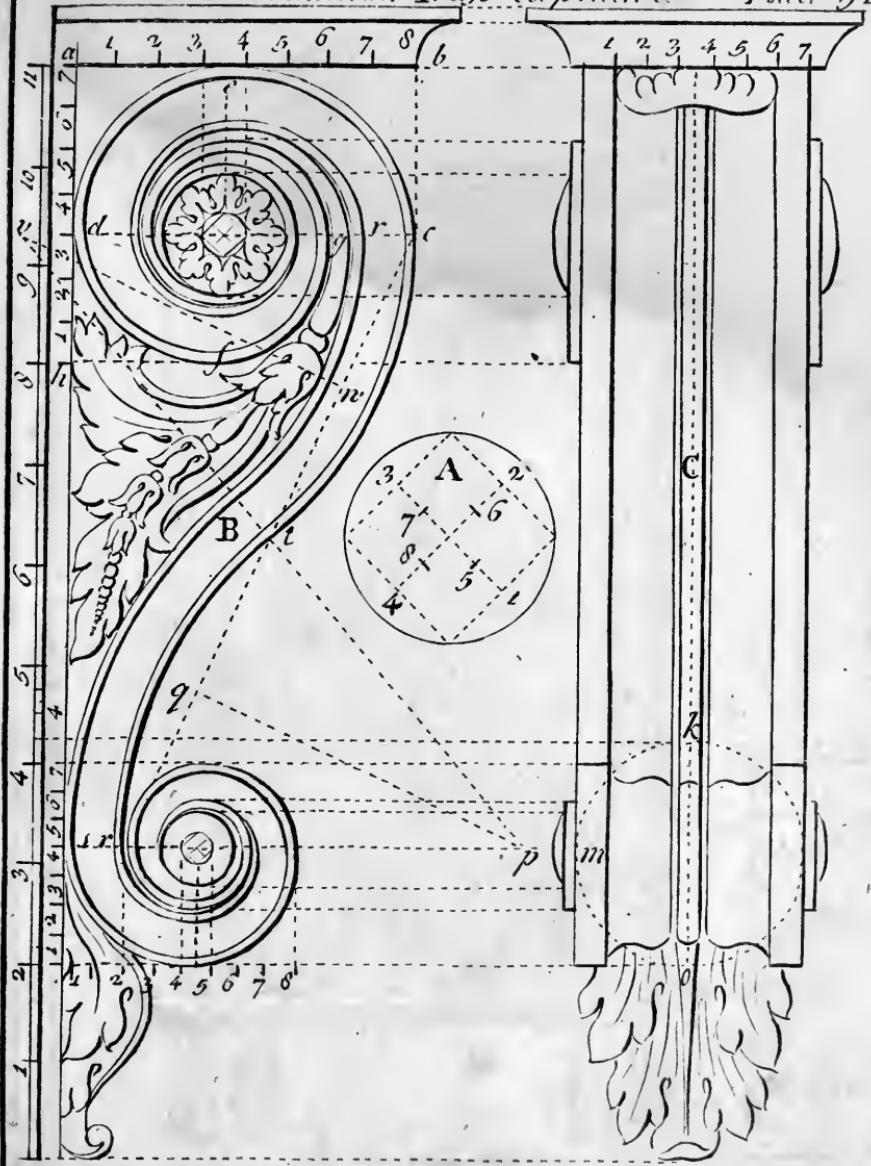
R







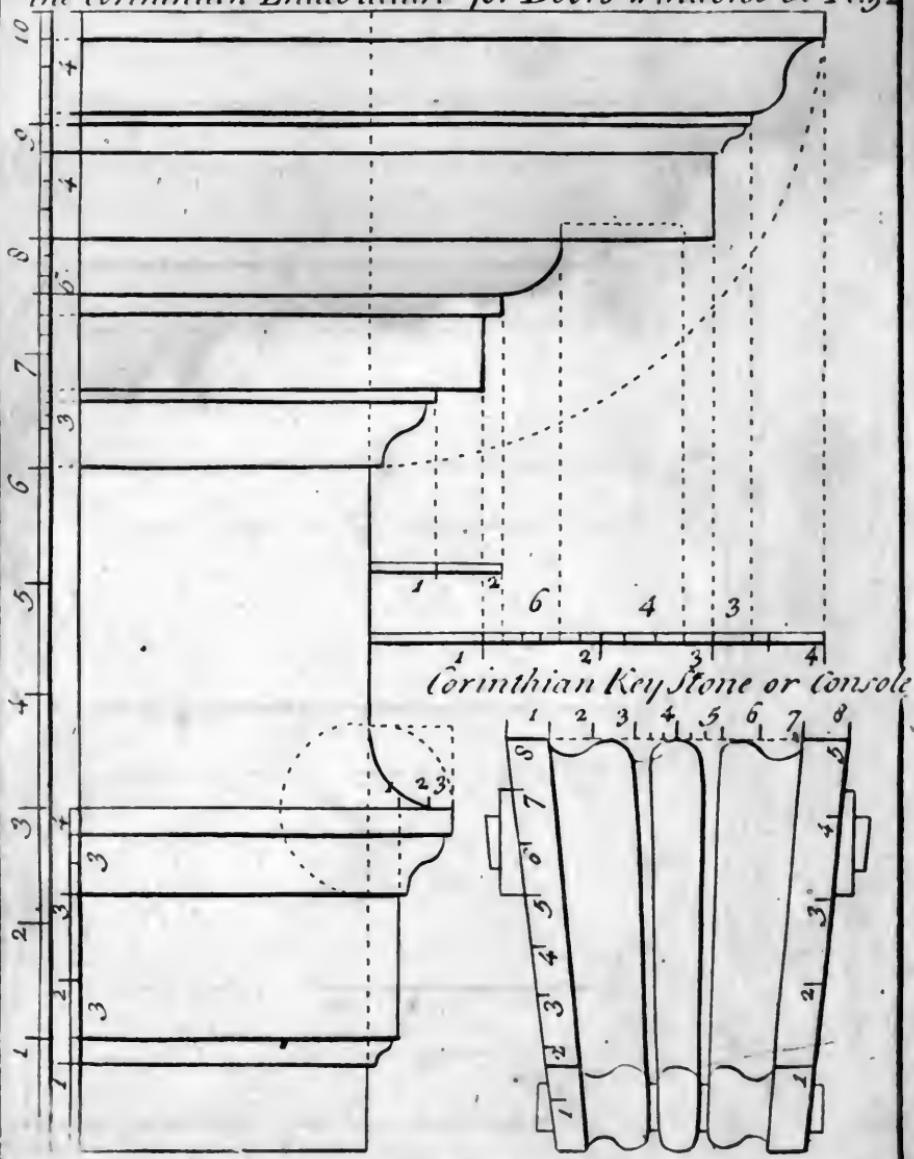
The Corinthian Truss explain'd      Plate 51





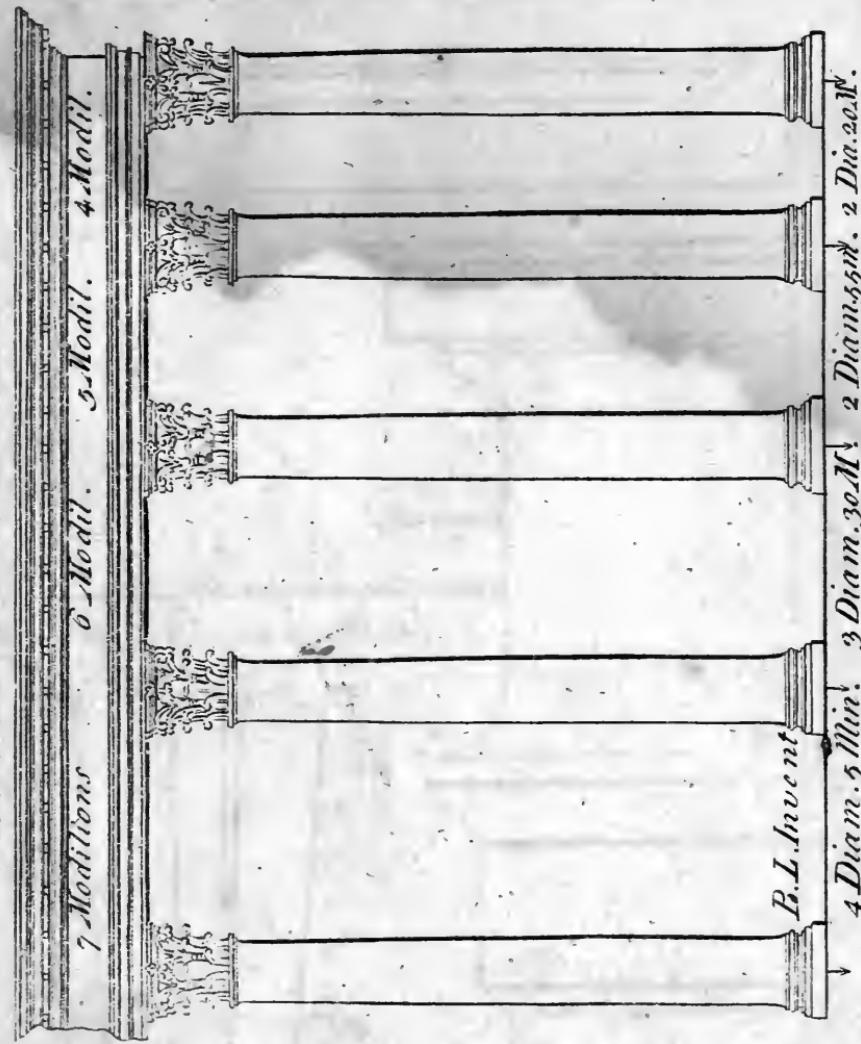


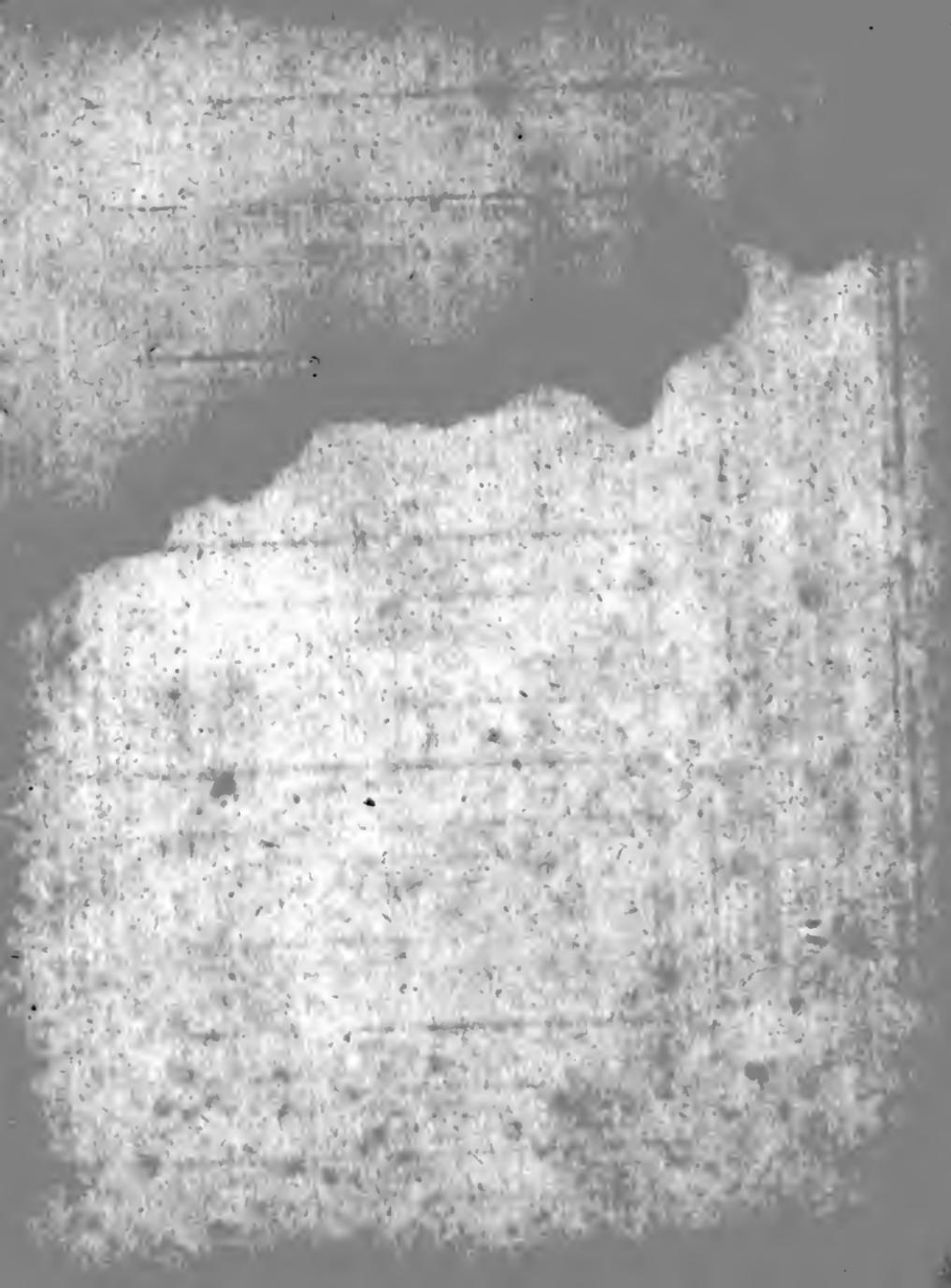
The Corinthian Entablature for Doors Windows &c Pl. 52



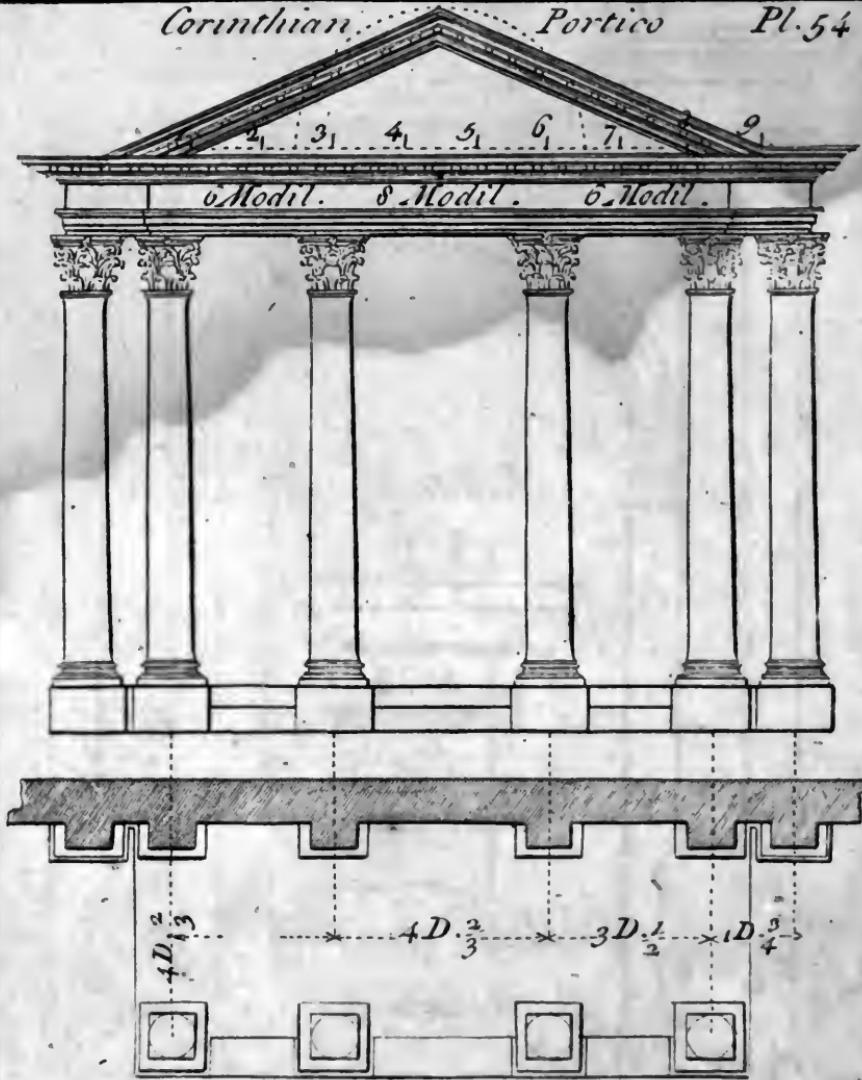
*Corinthian Intervolumniations*

7 Modillions 6 Modill. 5 Modill. 4 Modill.

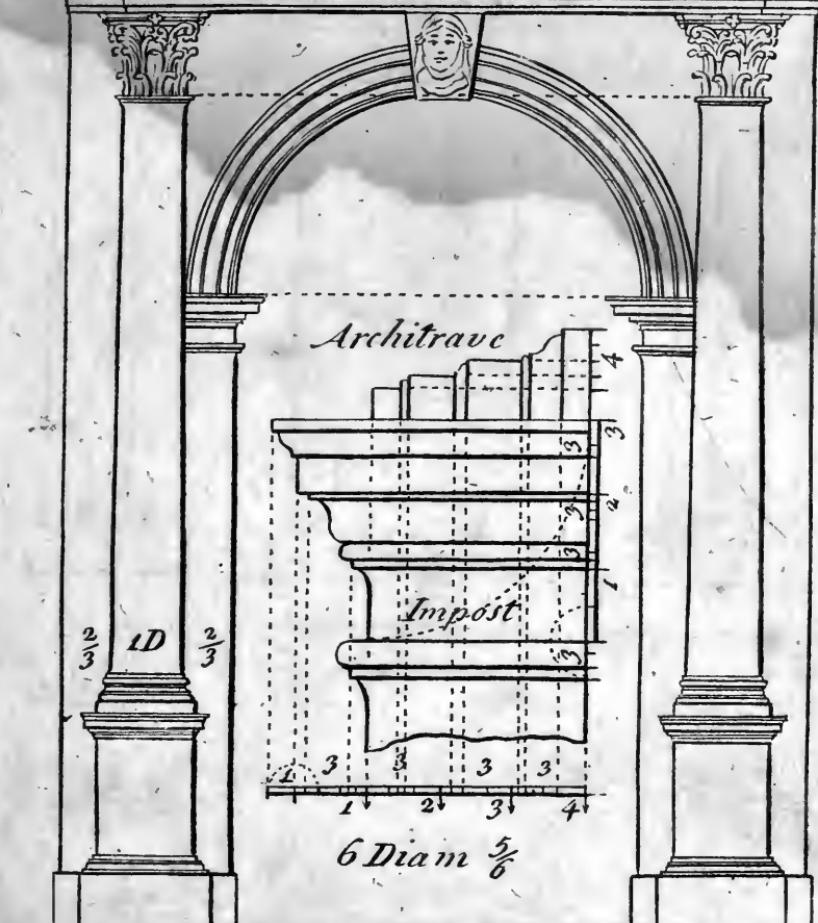








14 Modillions



T





## Corinthian Architecture

3 Med. 11. Medications 3 Med 31 - Medications

CHAPMAN - 1866

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卷之三

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卷之三

104

100

27

卷之三

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110

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ج. دلایلی. ۲۵ آذر ۱۴۰۰

6

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卷之三

L. *hirsutus*

222

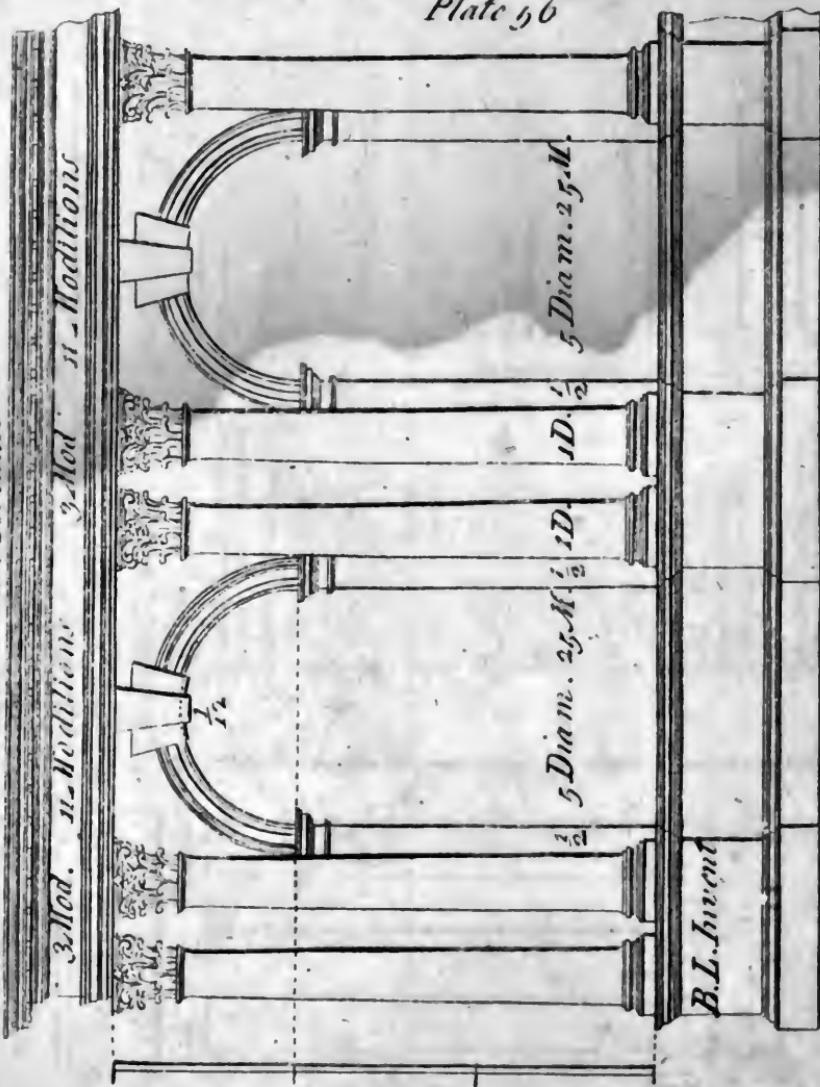
卷之三

111

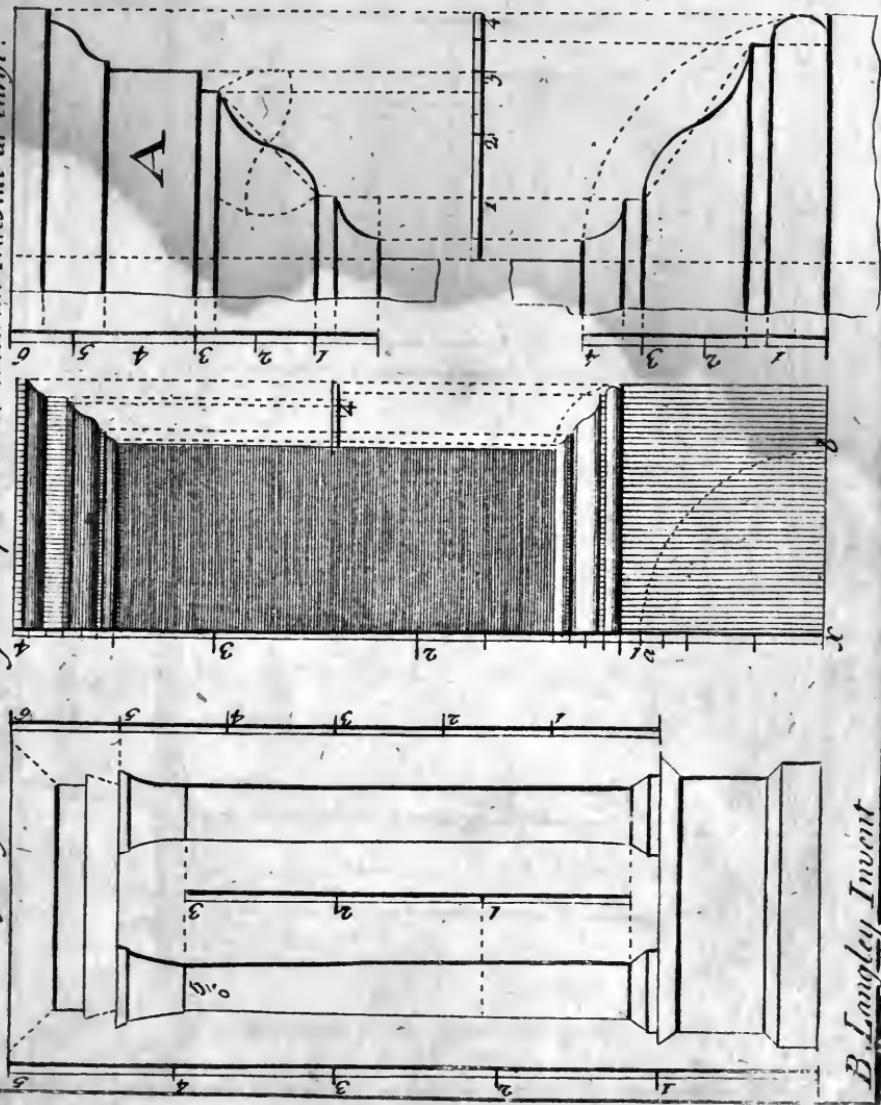
D 3 + 6 D 1233 25 1/16

THE 18TH CENTURY IN LITERATURE.

Plate 56



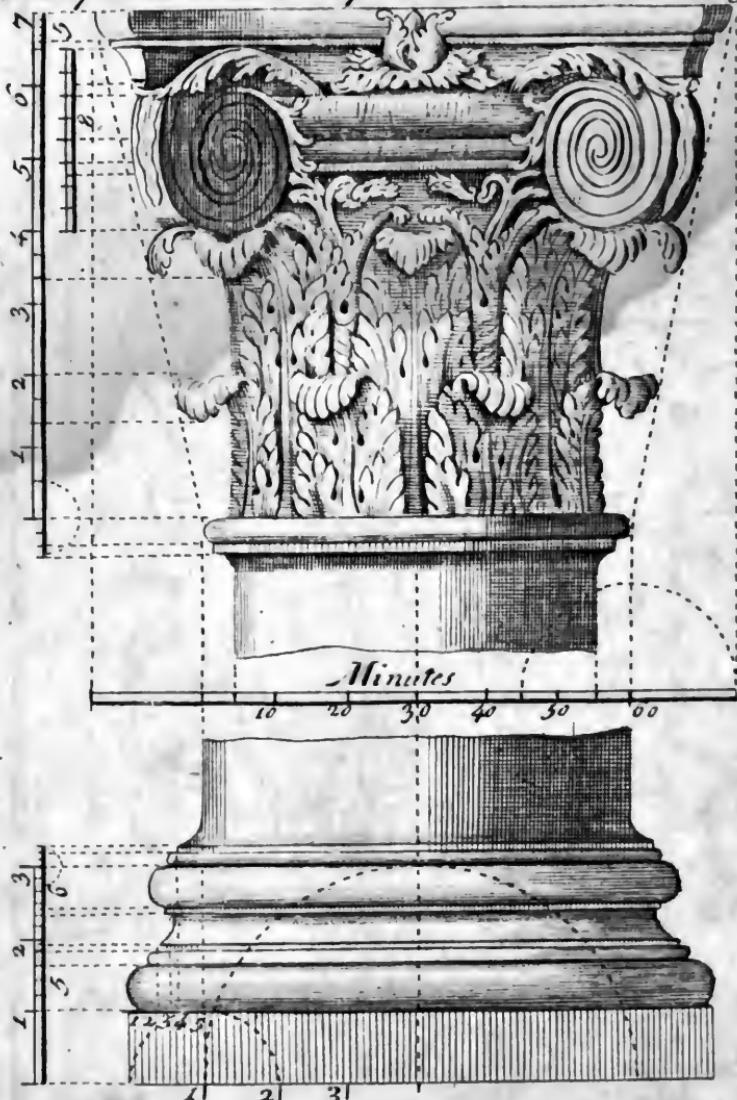
*The Division of the General Parts of the Composite order with the Pedestal at large.*







*The Composite Base & Capital to a Column Pl 58*



Composite Capital for a column  
at large

Pl. 59



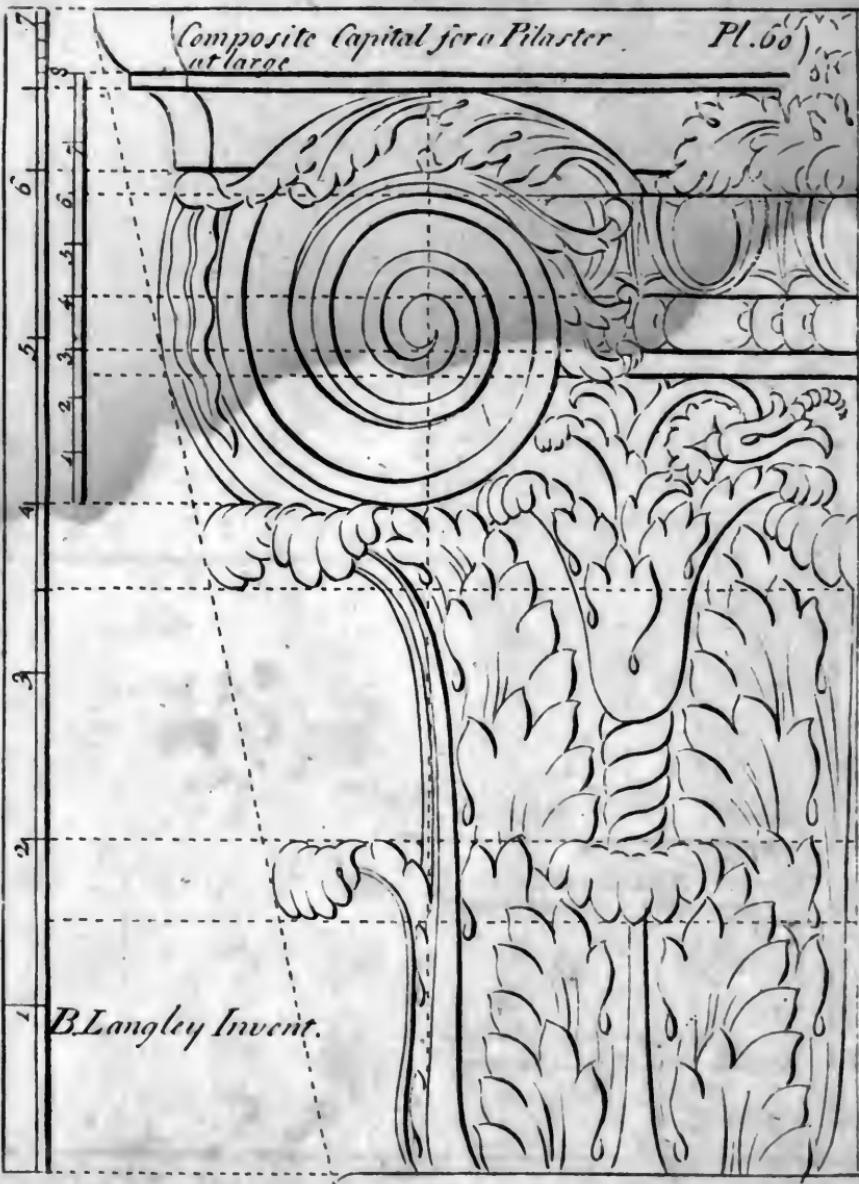
B. Langley Invent.





Composite Capital from Pilaster  
at large

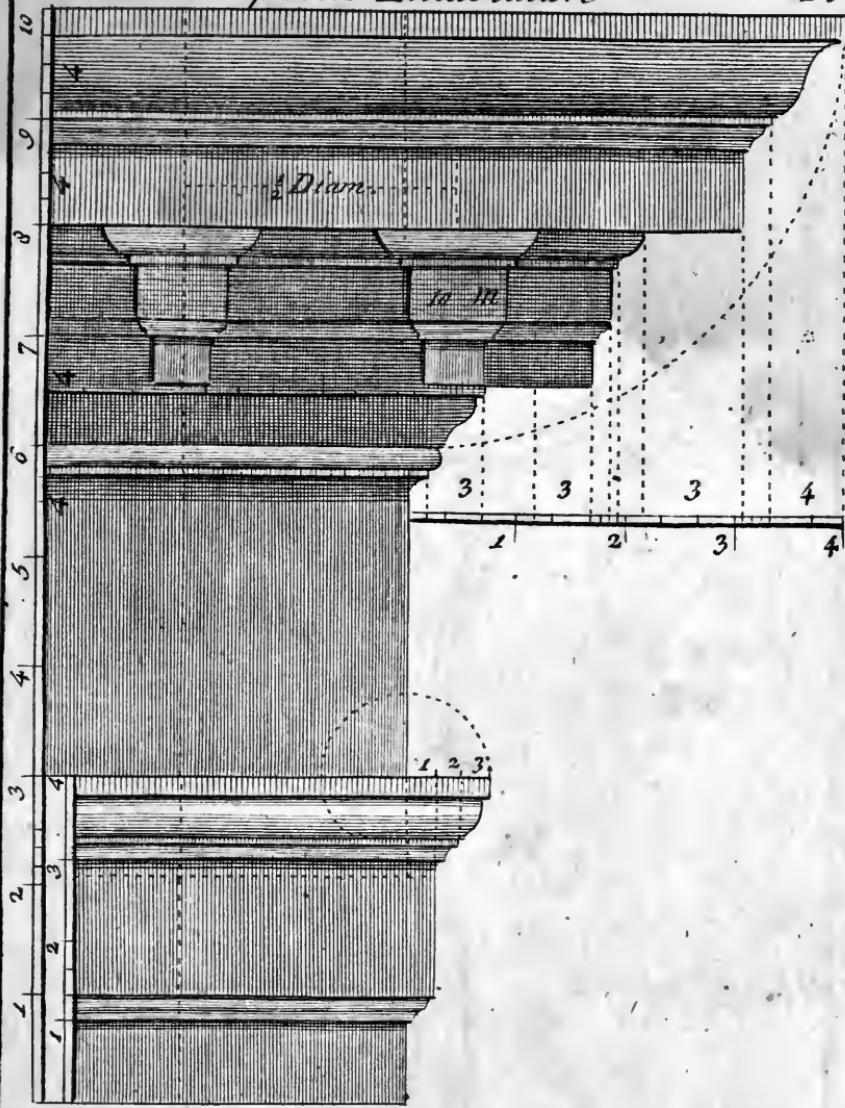
Pl. 60



B. Langley Invent.

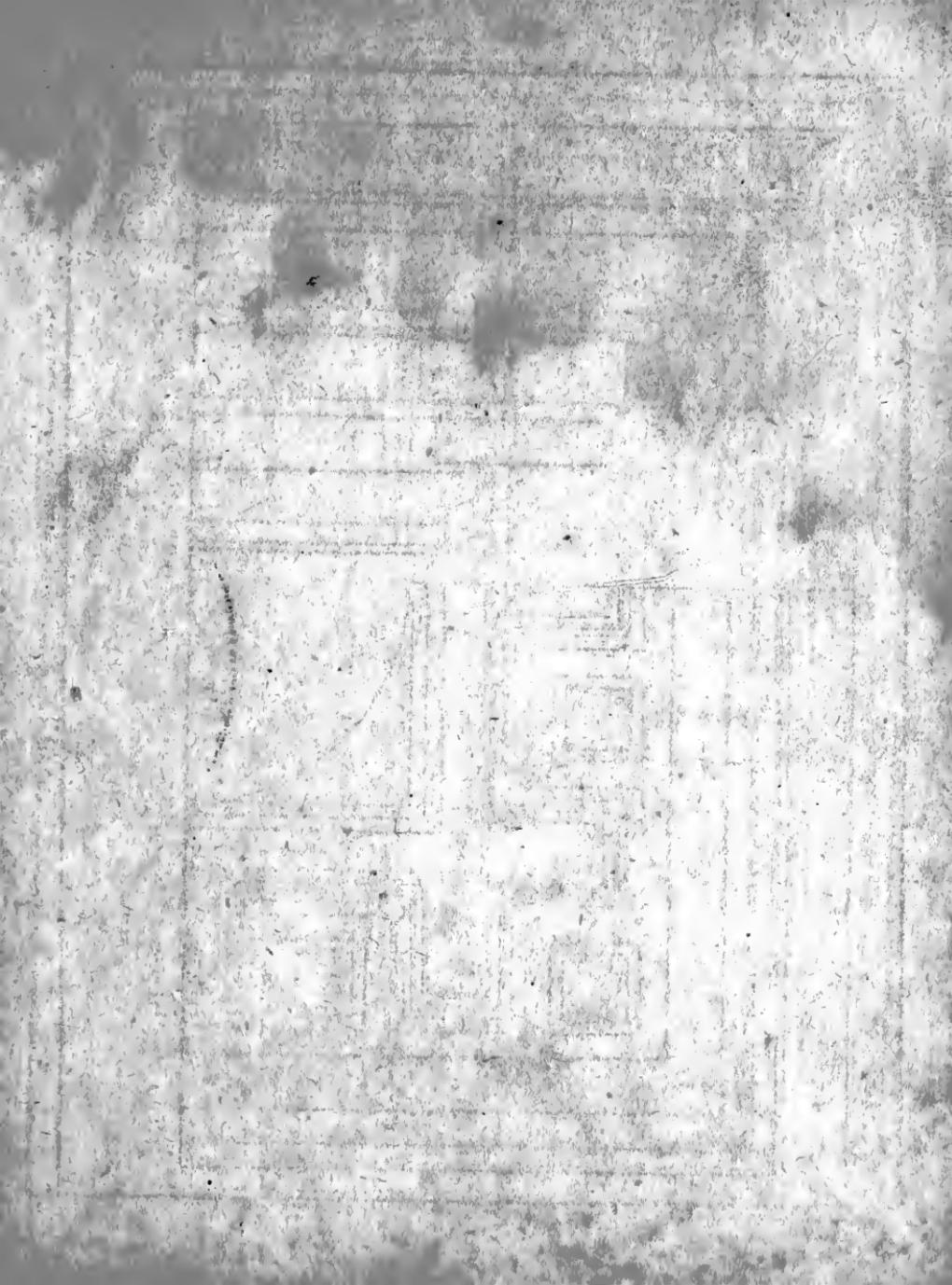
*The Composite Entablature*

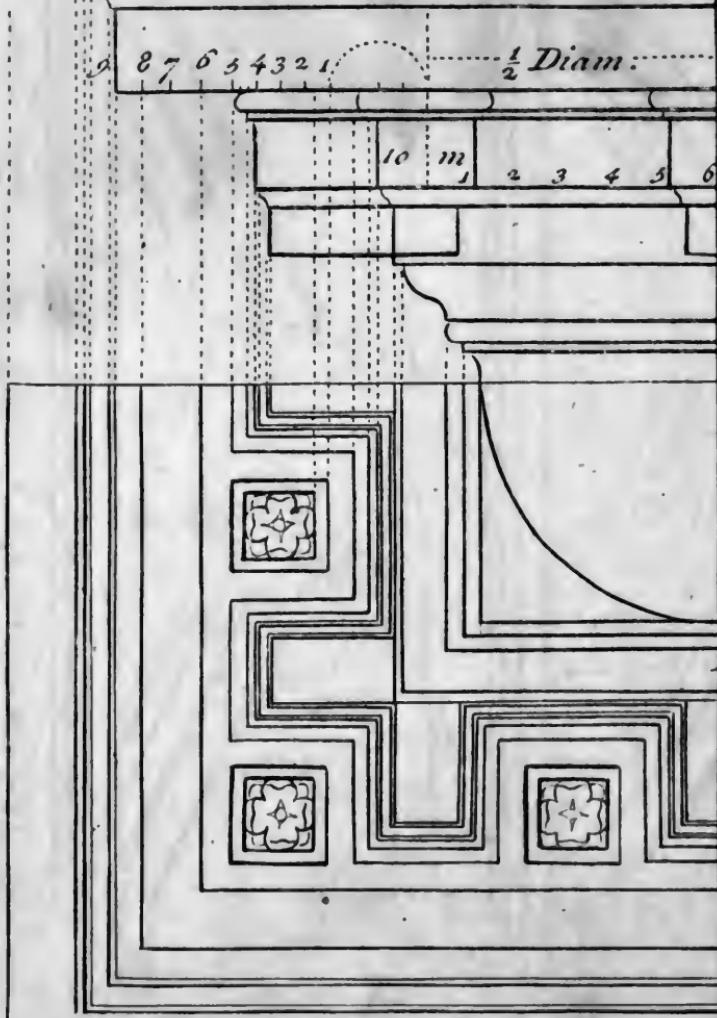
Pl. 61

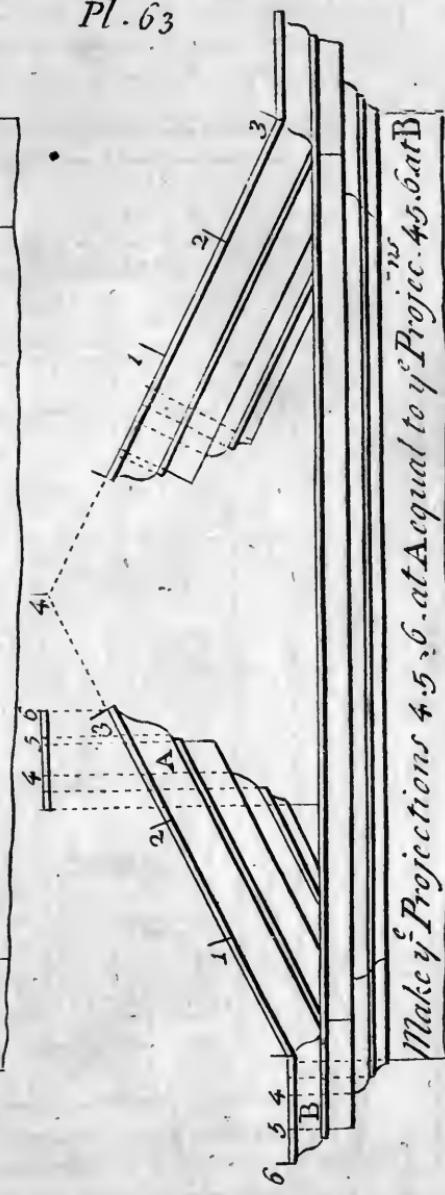
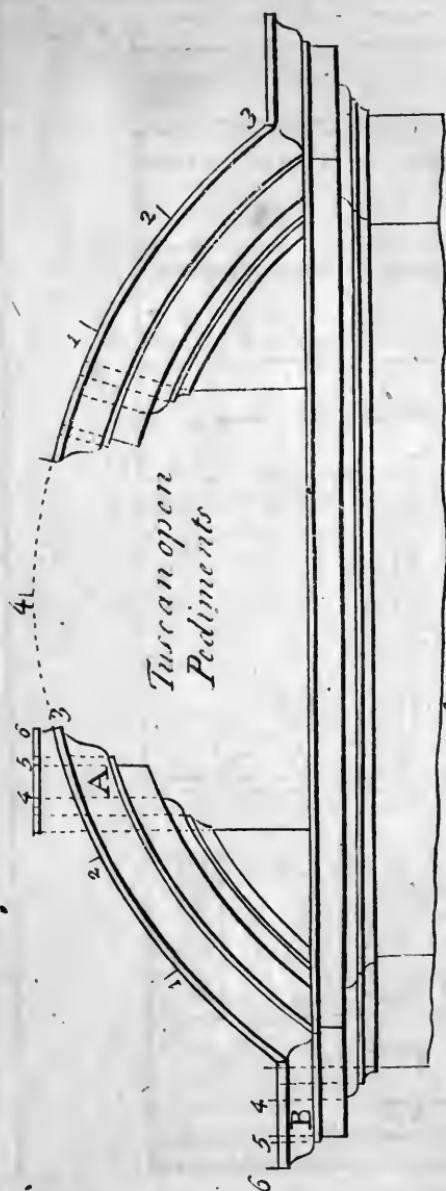


X





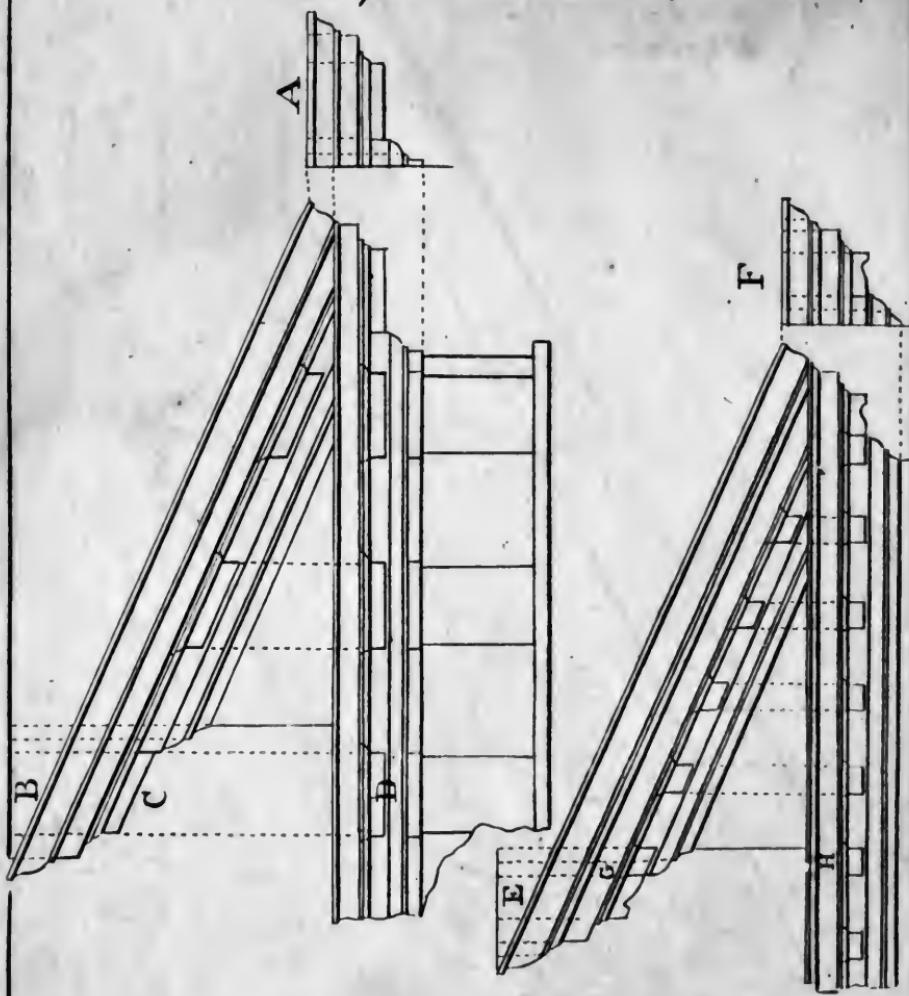
*The Planche or the Composite Cornice*



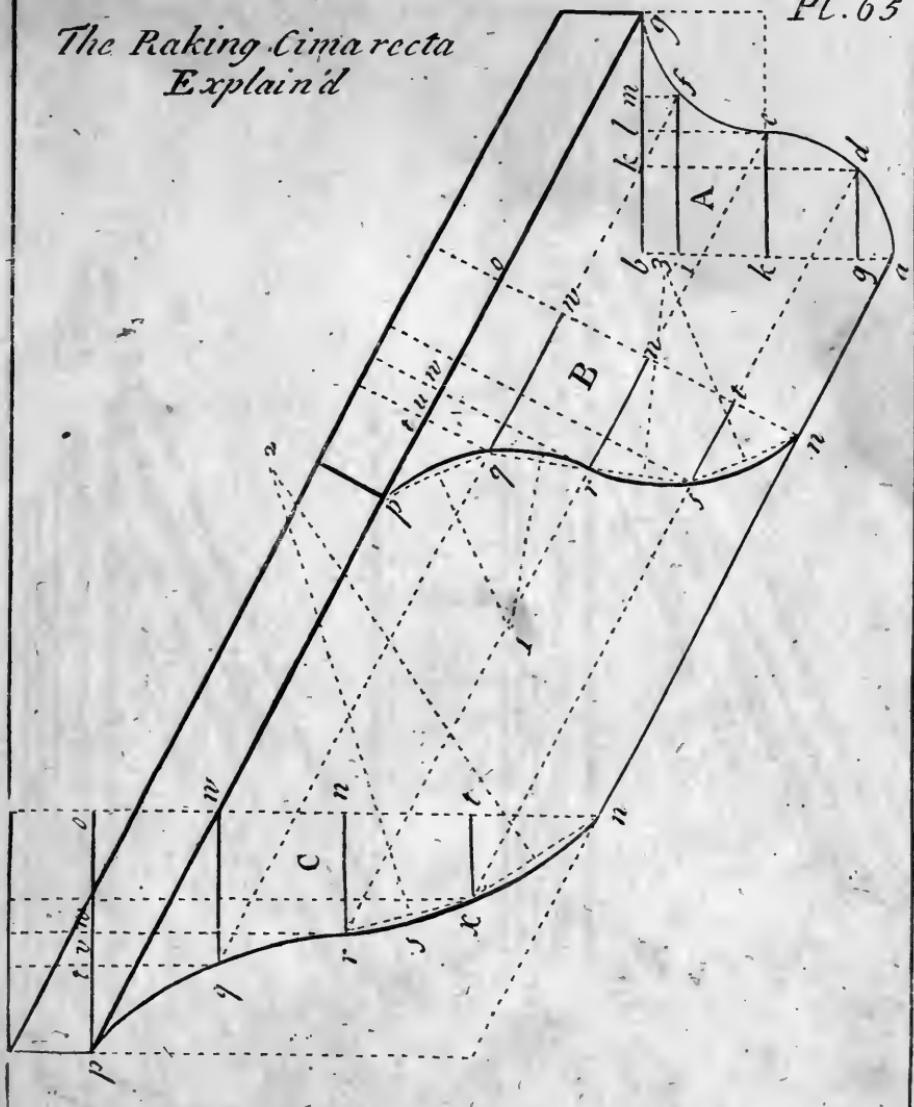


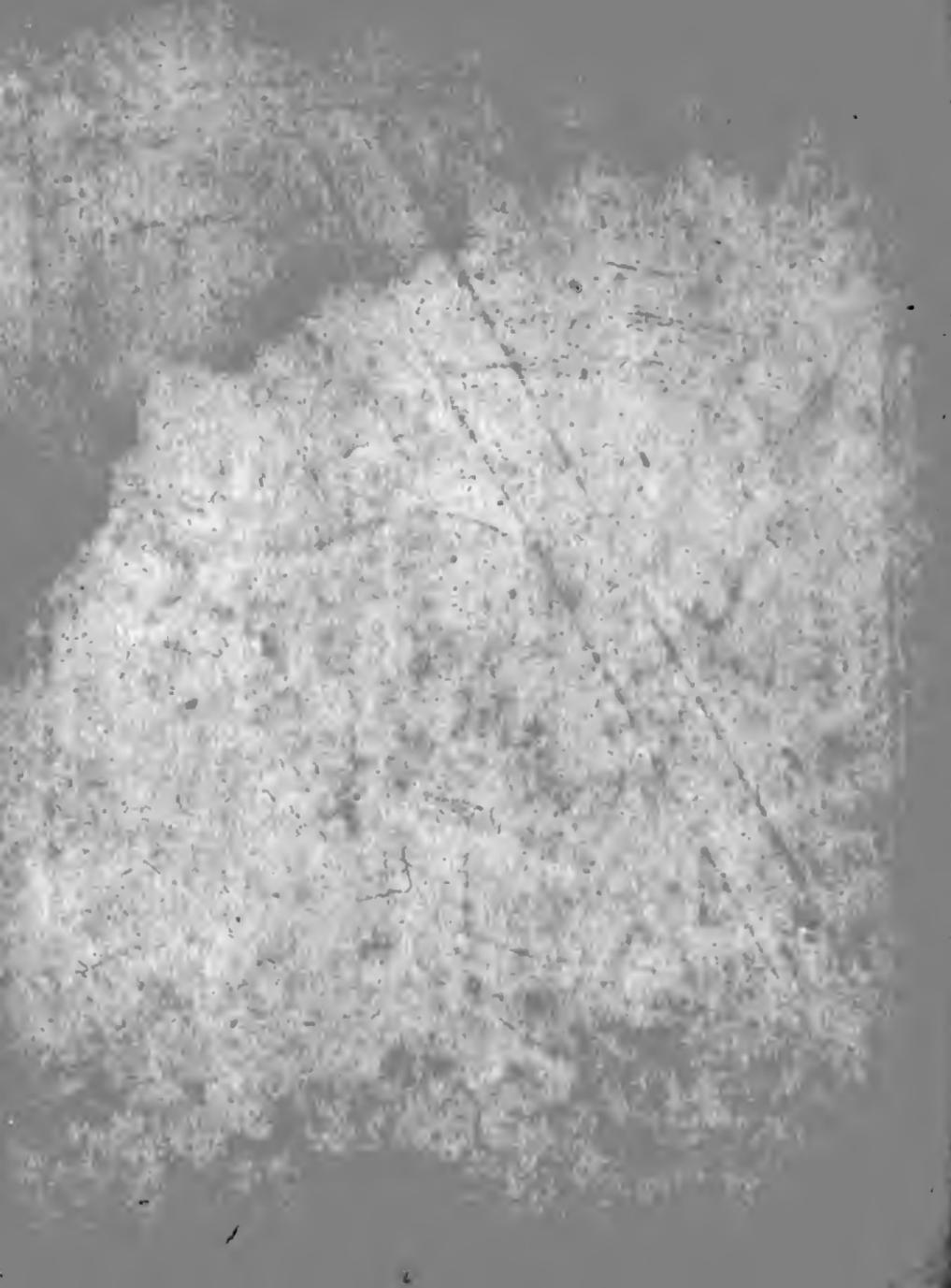


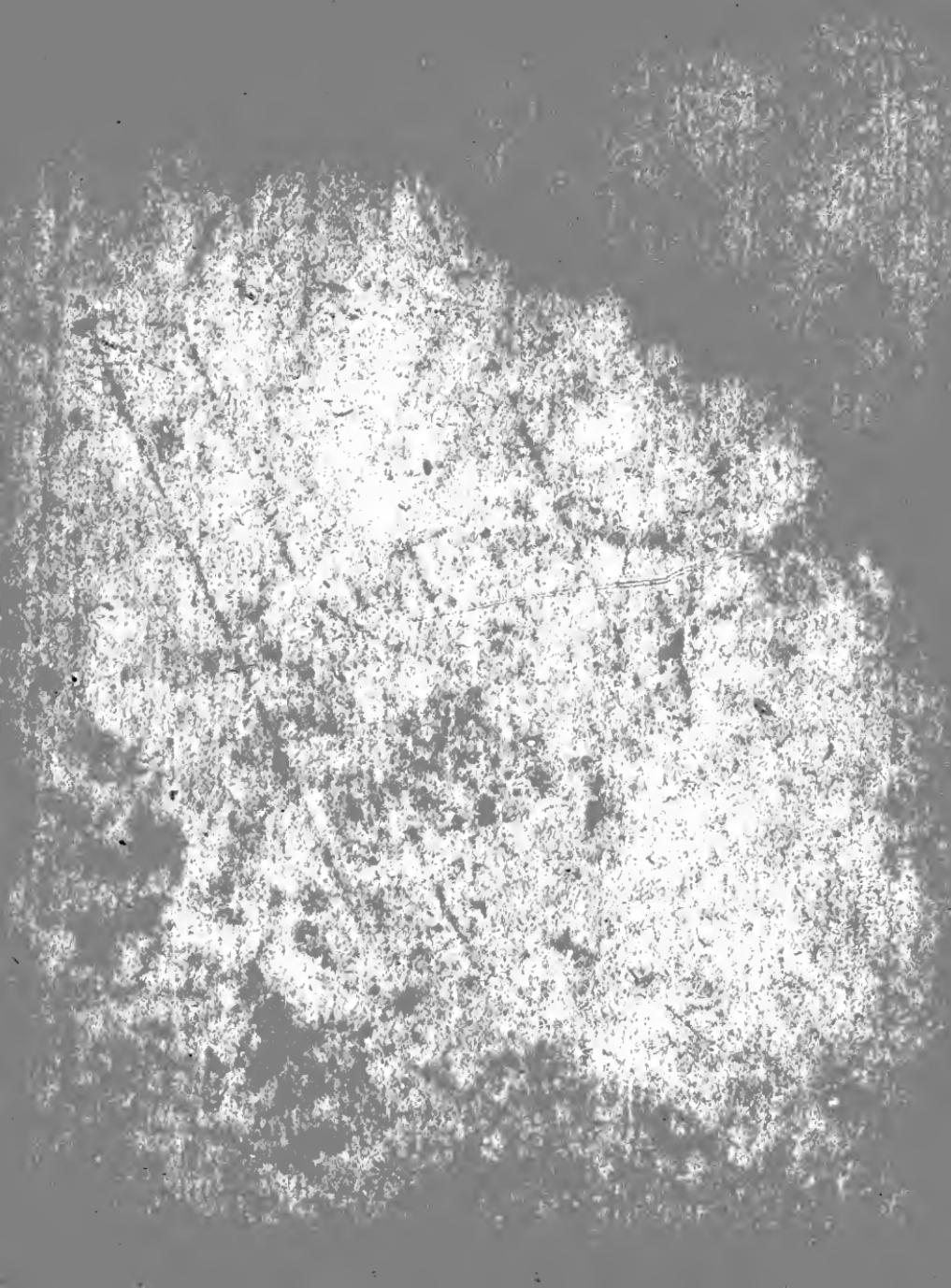
*The Dorick & Ionick open Pediment Explain'd Pl. 64*



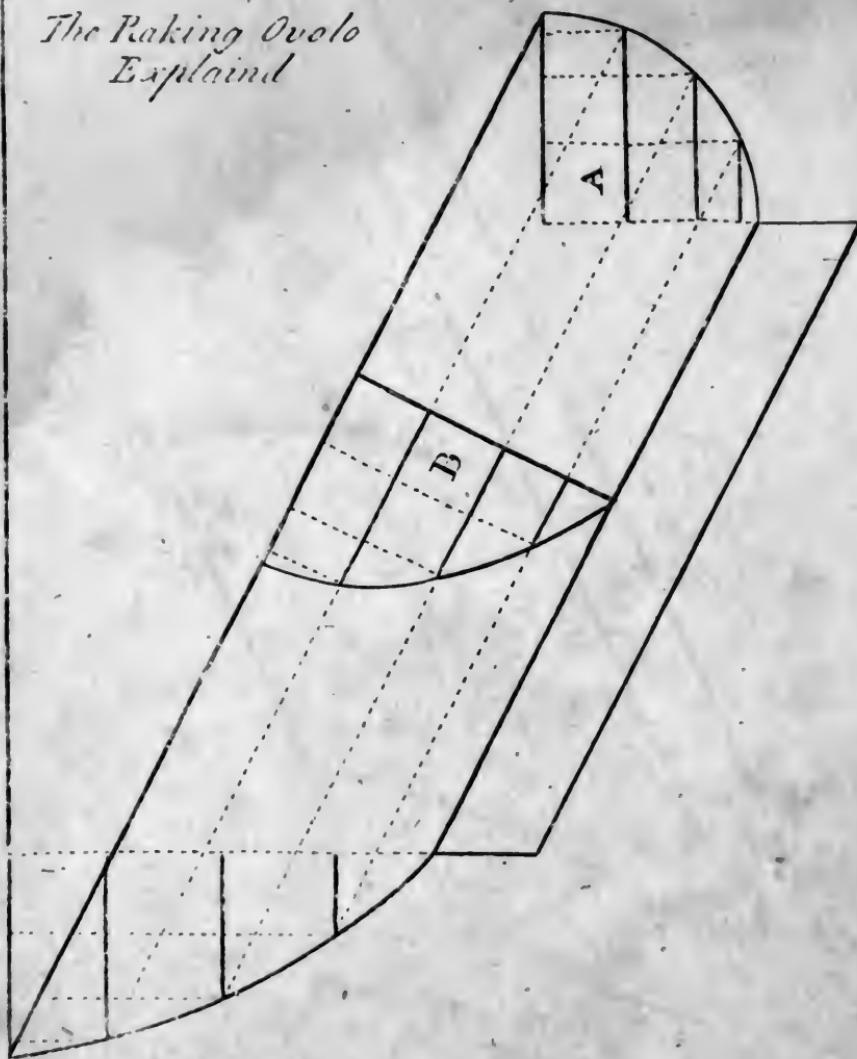
The Raking Cima recta  
Explain'd



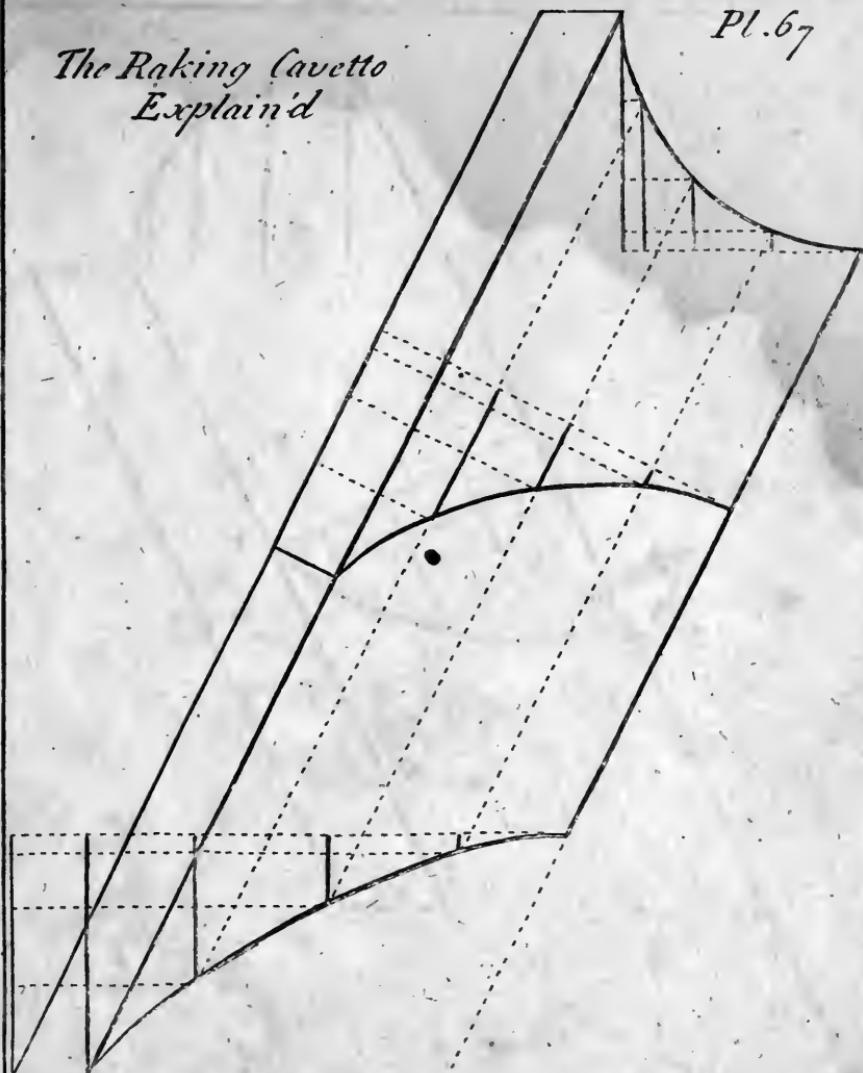




*The Raking Ovolo  
Explained*

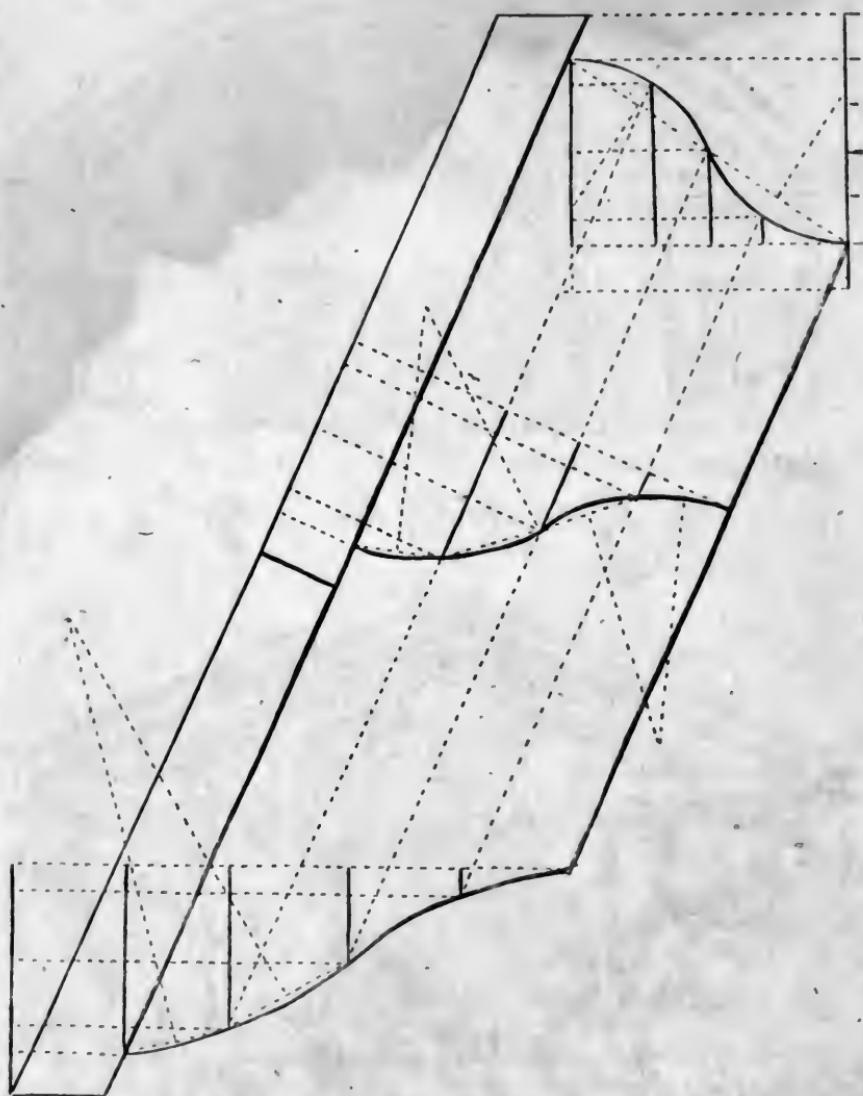


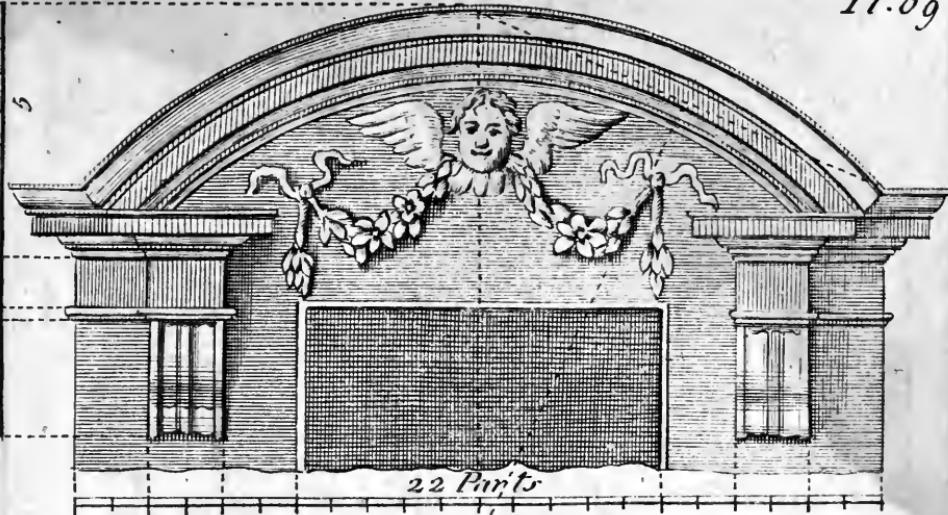
*The Raking Savello  
Explain'd*



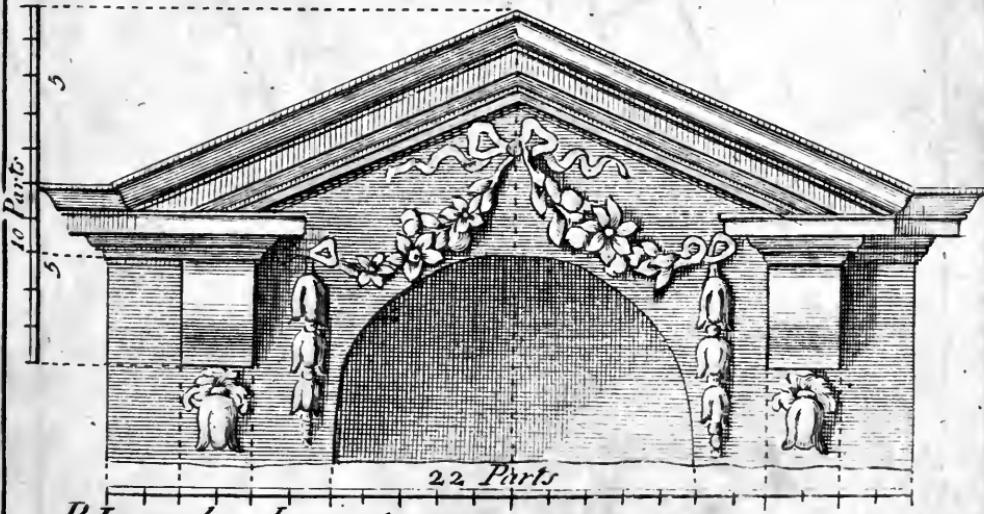








*Open Bed mould Pedim<sup>ts</sup>*

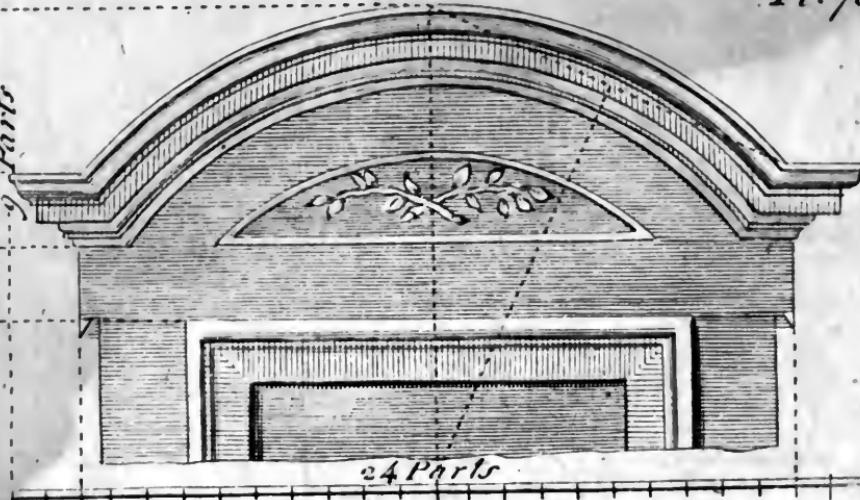


*B. Langley Invent*



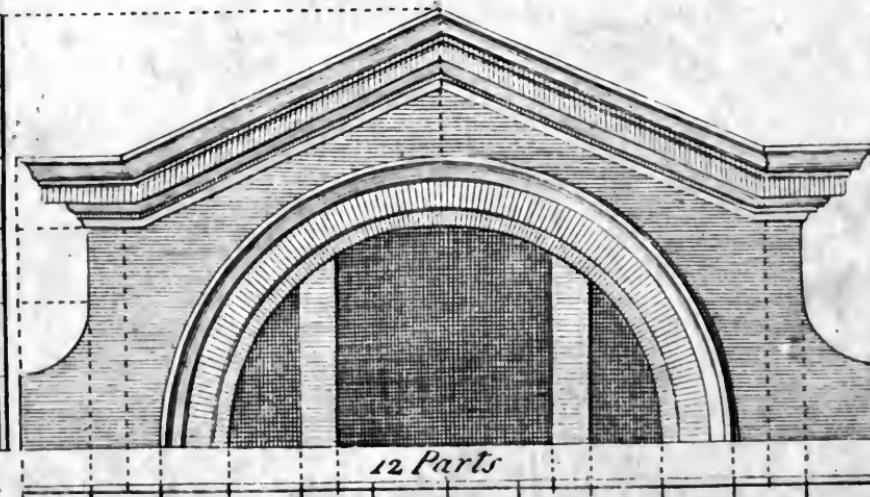


9 Parts



Pediments of continued cornices

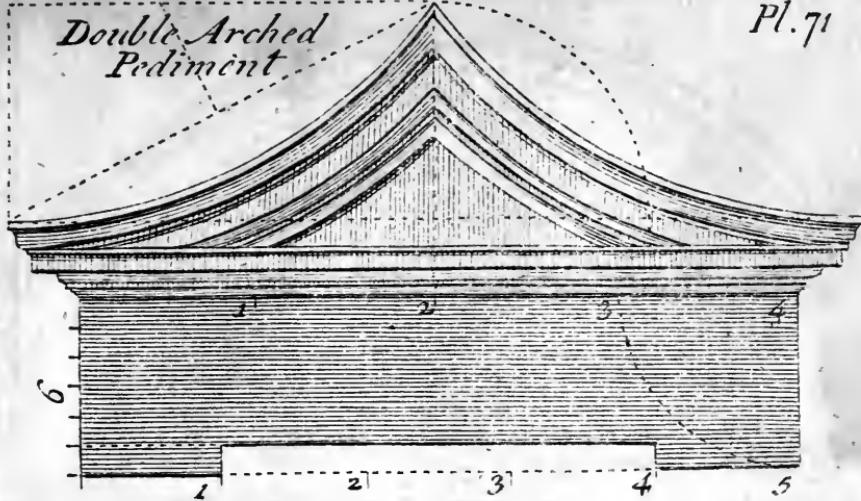
6 Parts



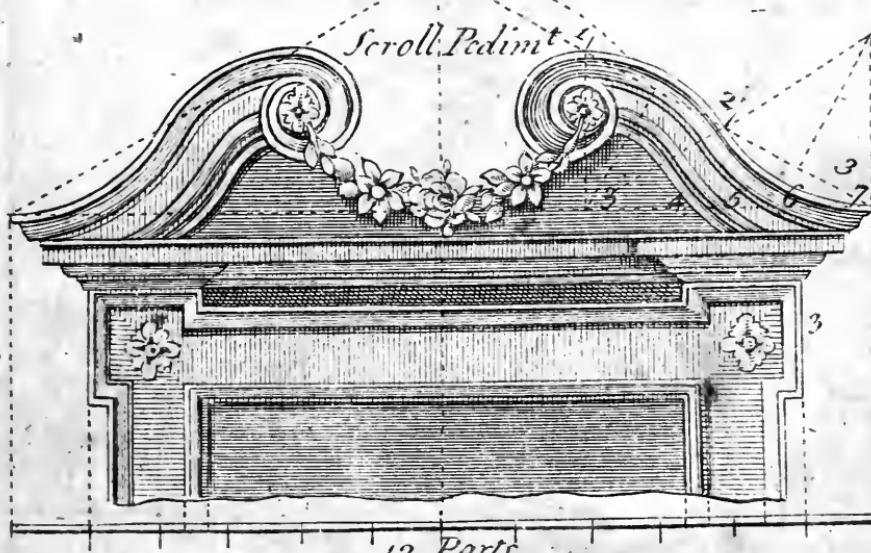
B Langley Invent

Double Arched Pediment

Pl. 71

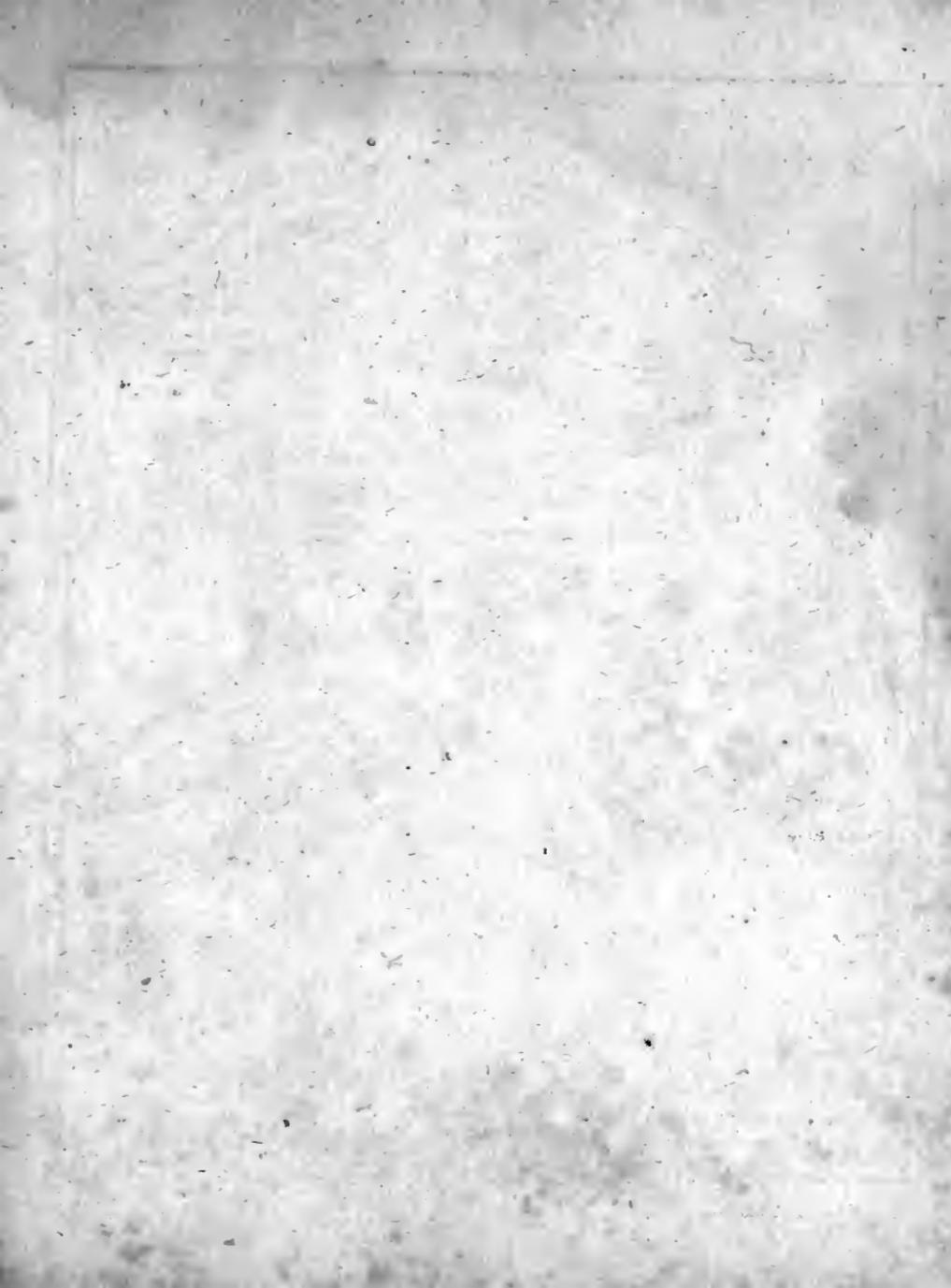


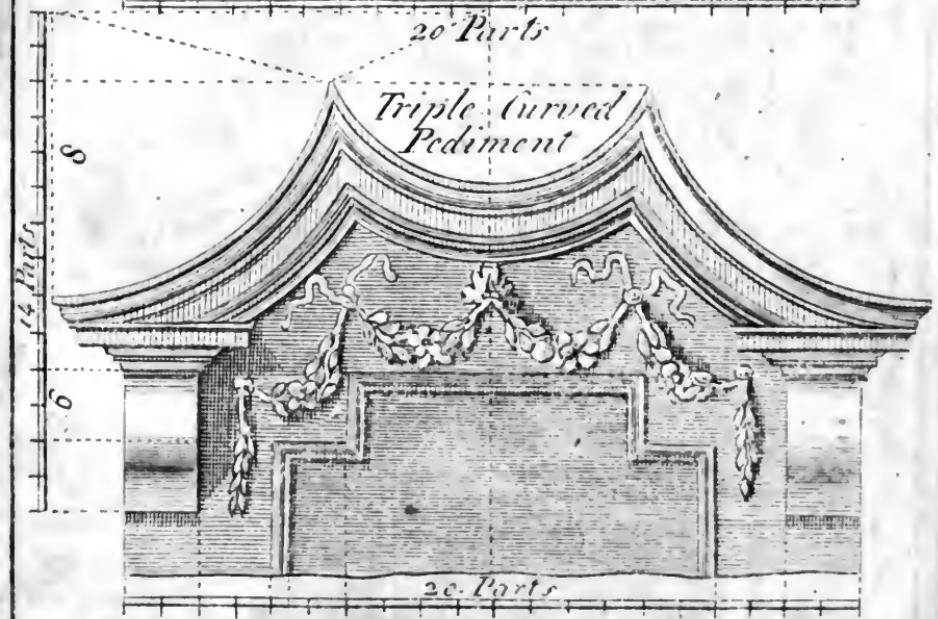
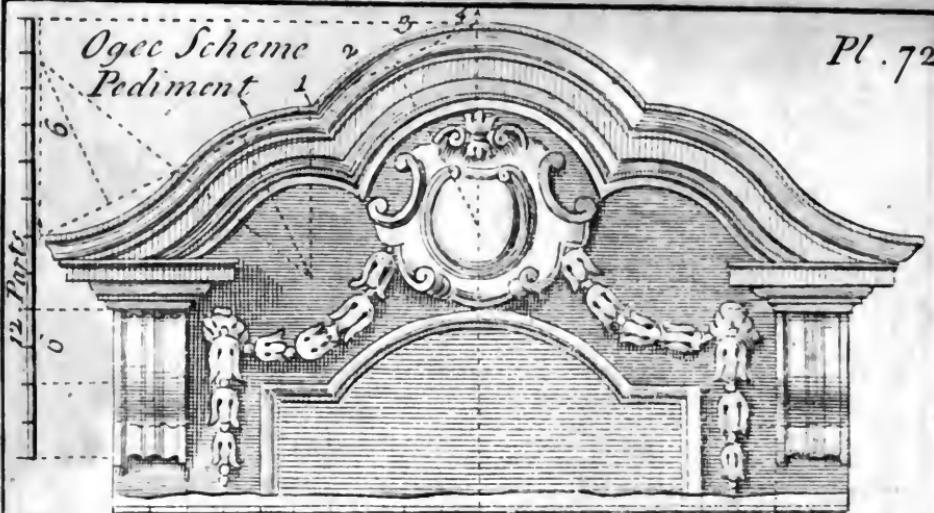
Scroll Pediment

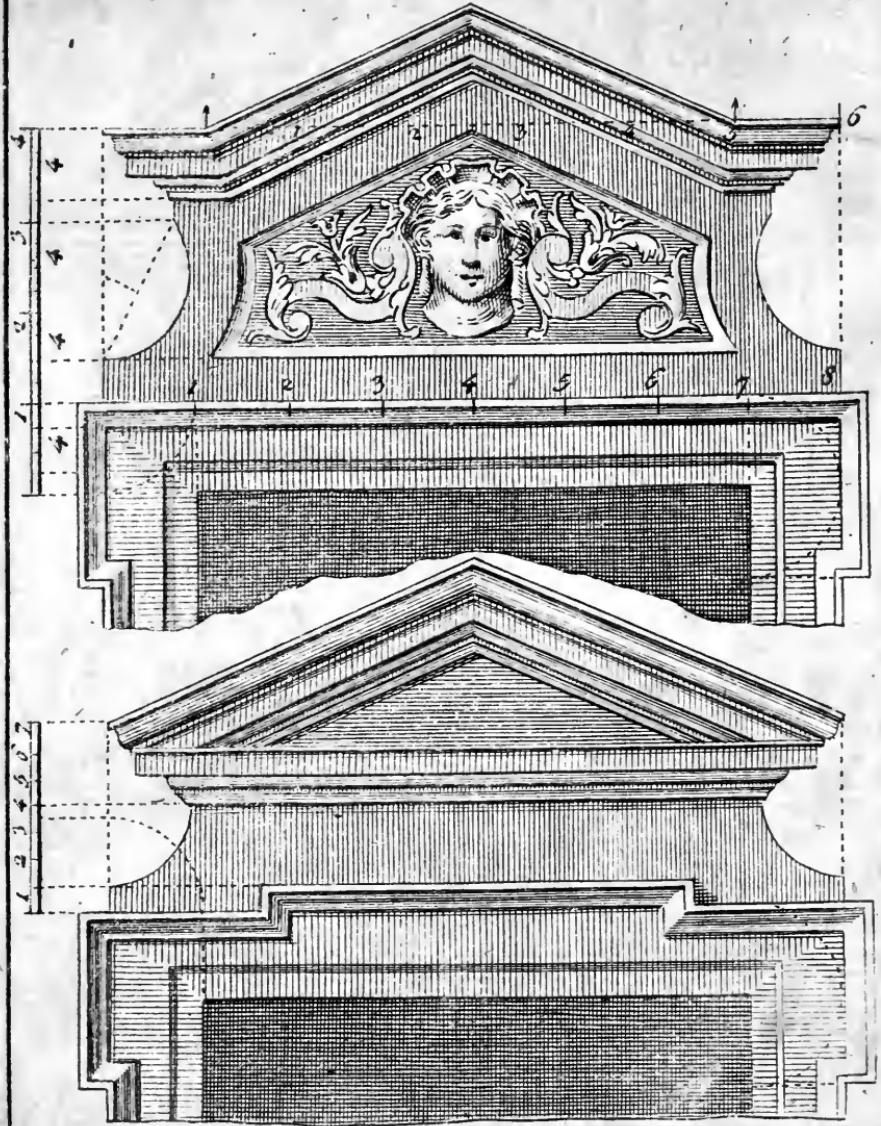


A a









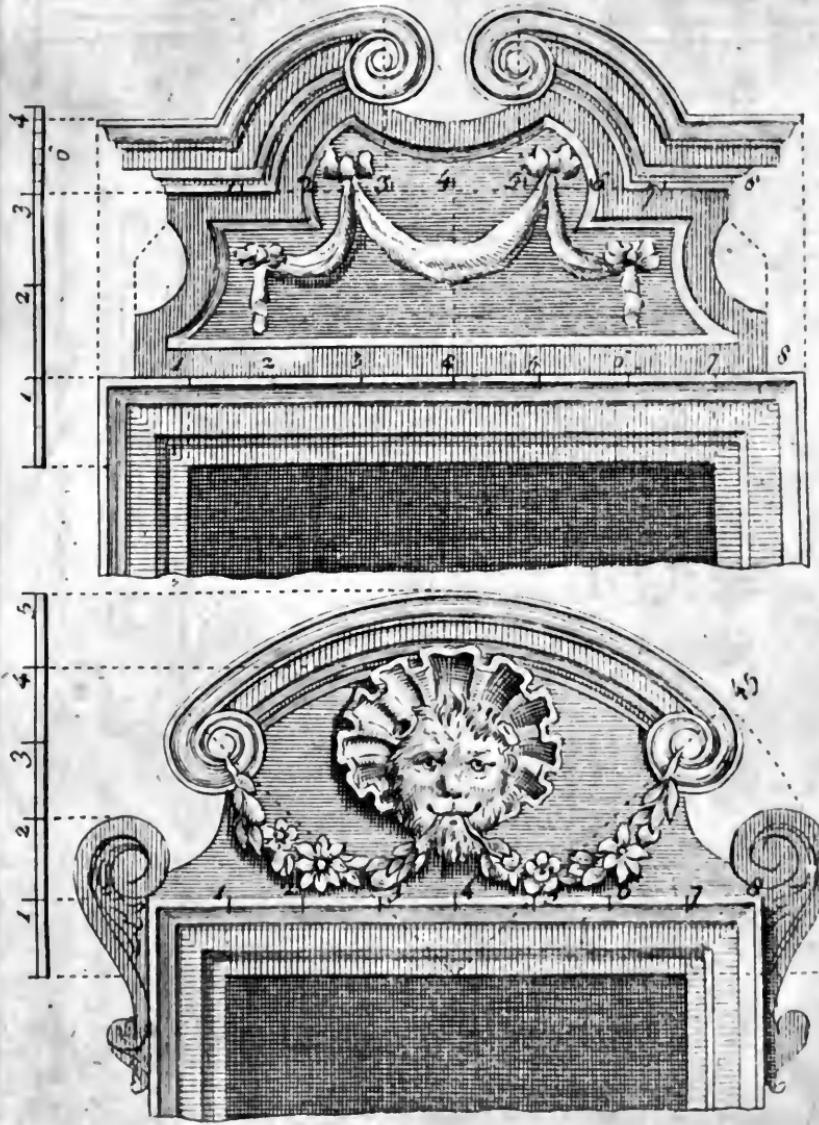
Bb



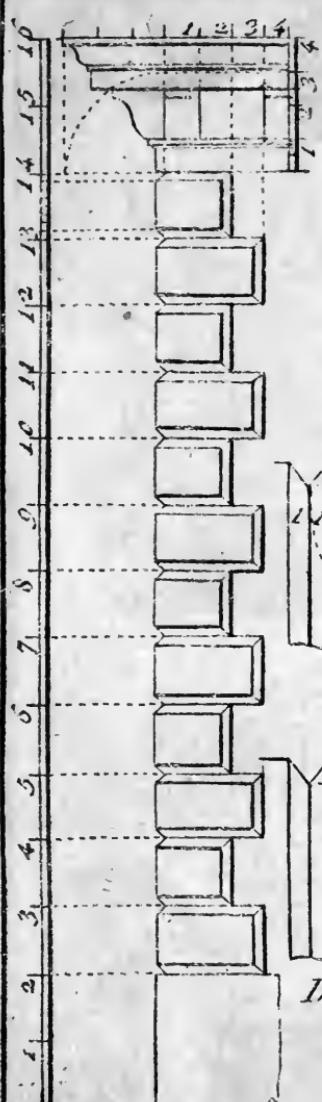


*Contracted Scroll Pediments*

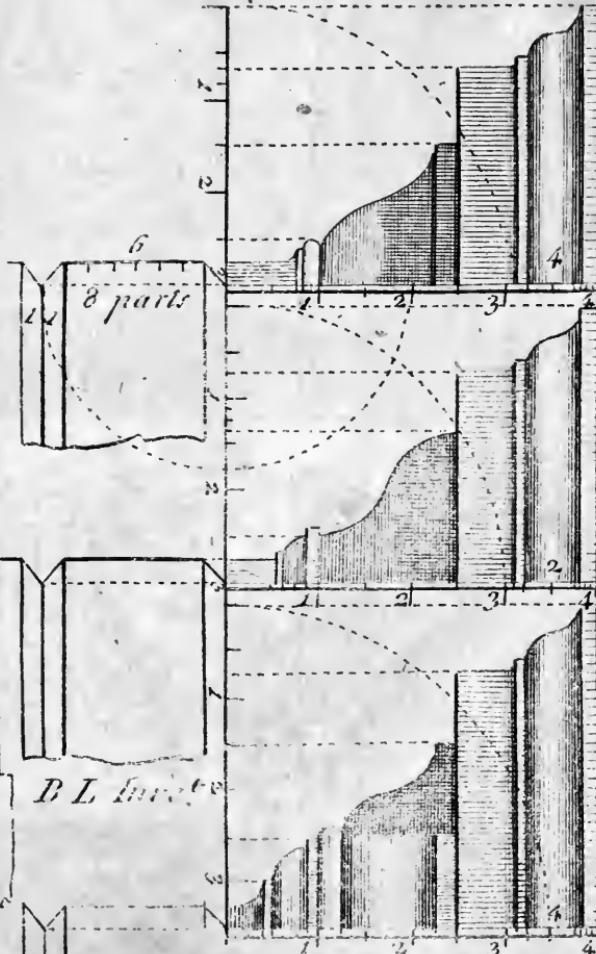
Pl. 74



*Block cornices*



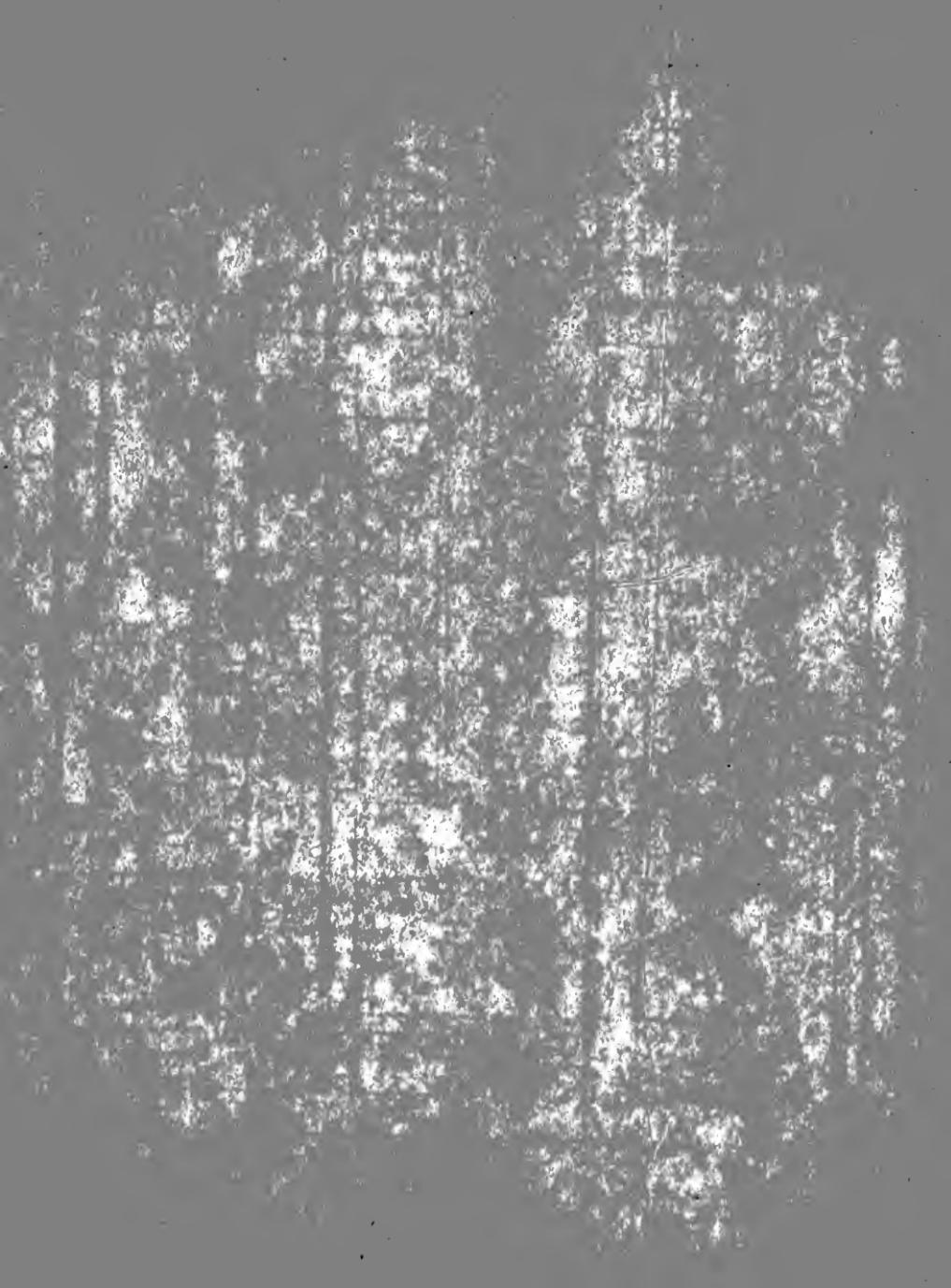
*BL. cornice*



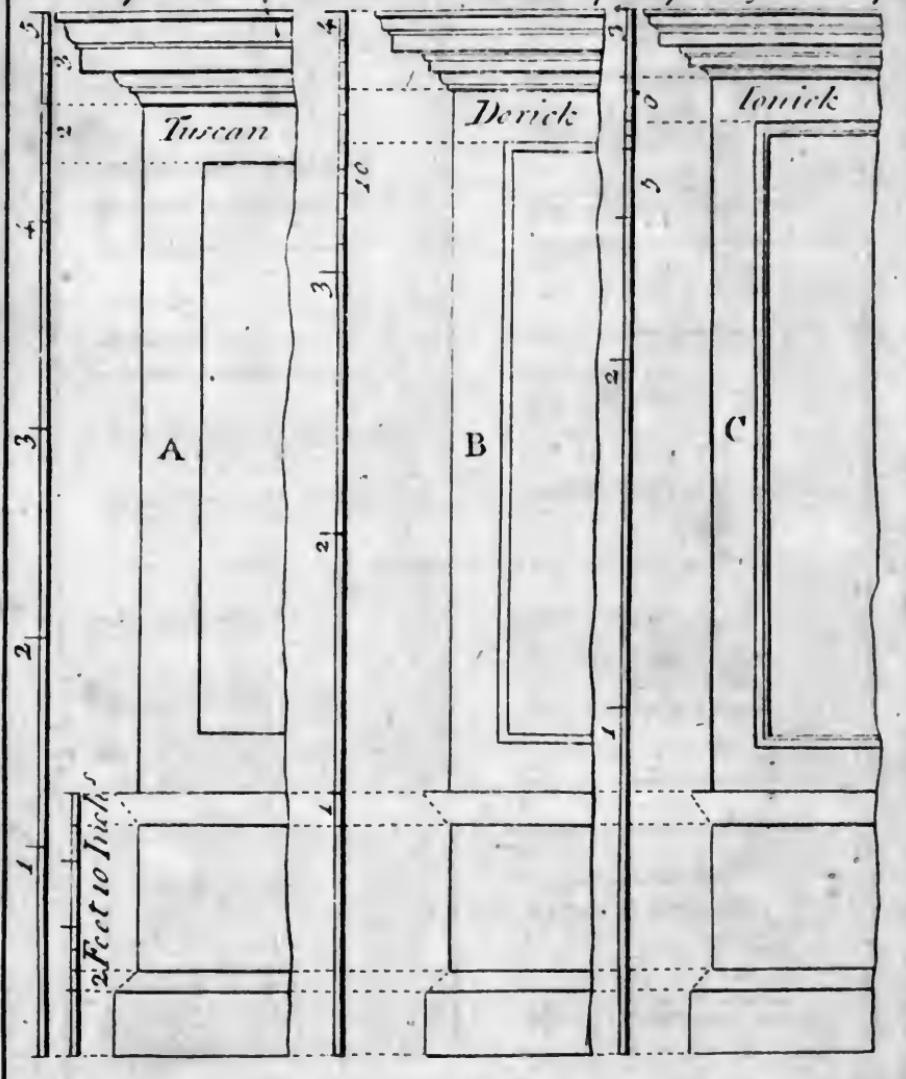
*Pl. 75*





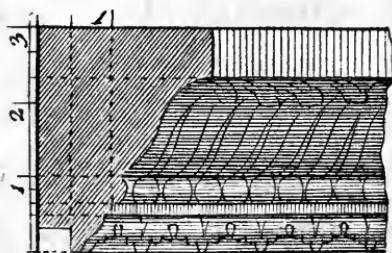
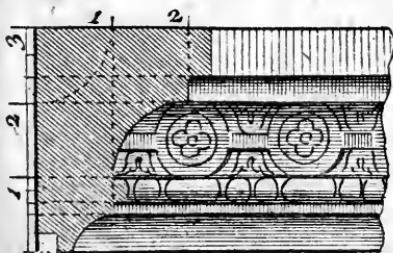
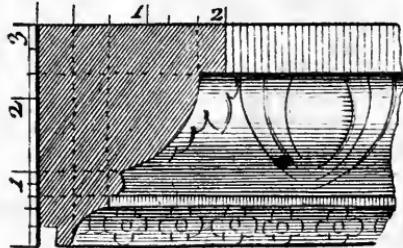
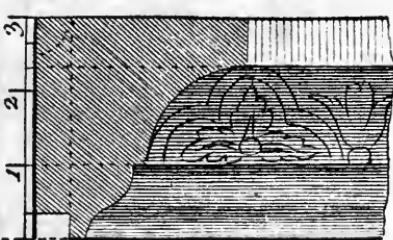
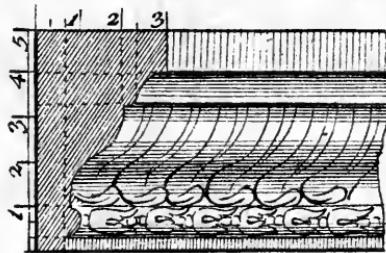
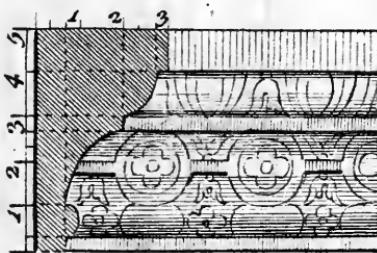
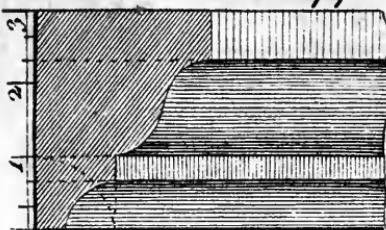
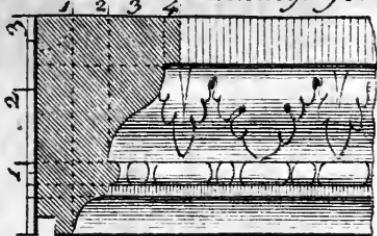


*To Proportion cornices to Rooms of any Height Pl: 76*



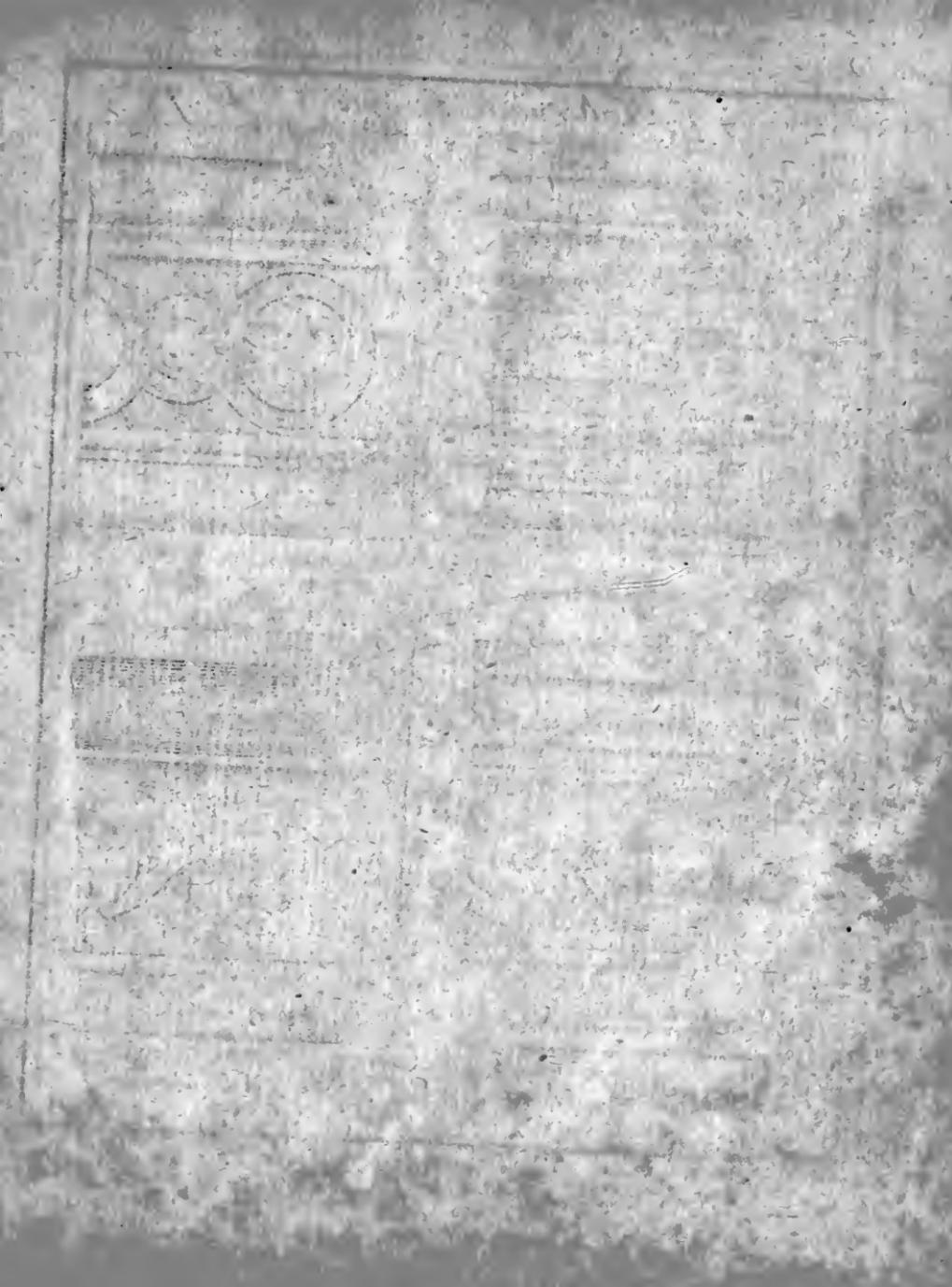
Mouldings for Pannels &c.

Pl. 77



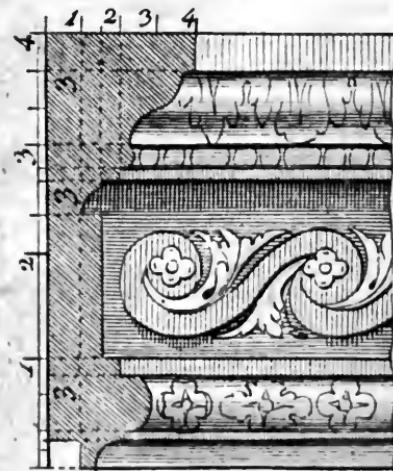
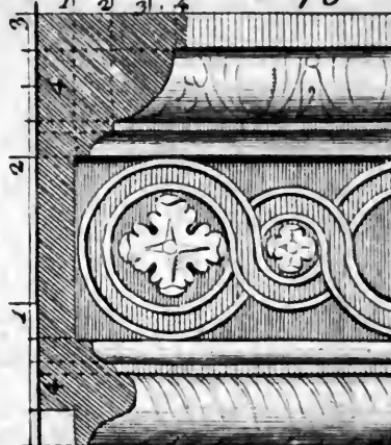
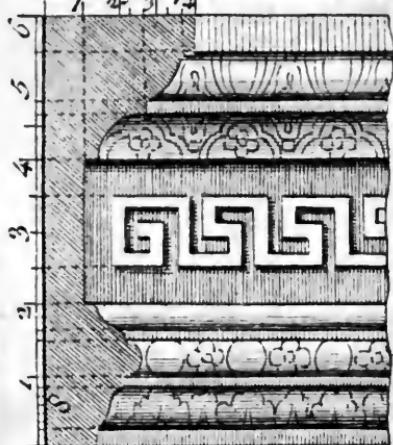
C c





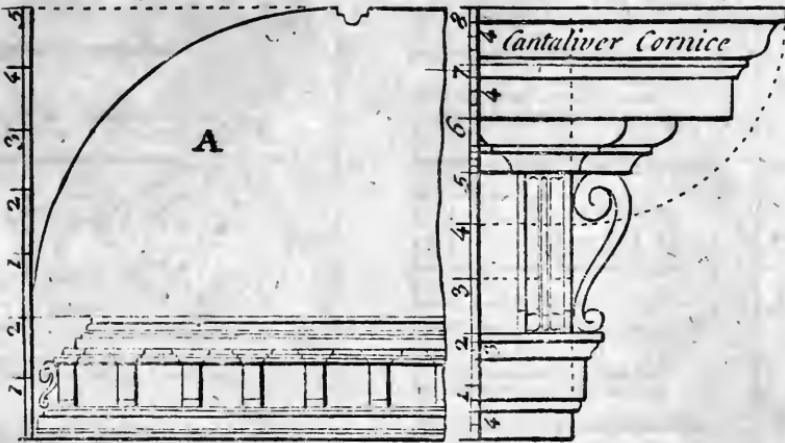
*Mouldings for Tabernacle Frames*

Pl. 78

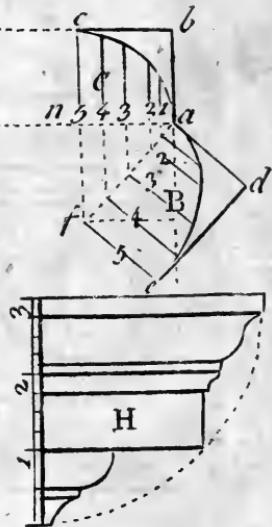
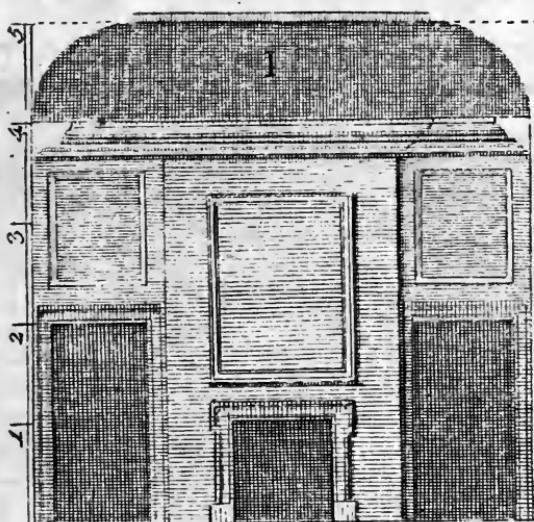


*A* above  $\frac{4}{5}$  of the entire Height.

Pl. 79



*A* above  $\frac{5}{6}$  of the entire Height



BL Inv. . .

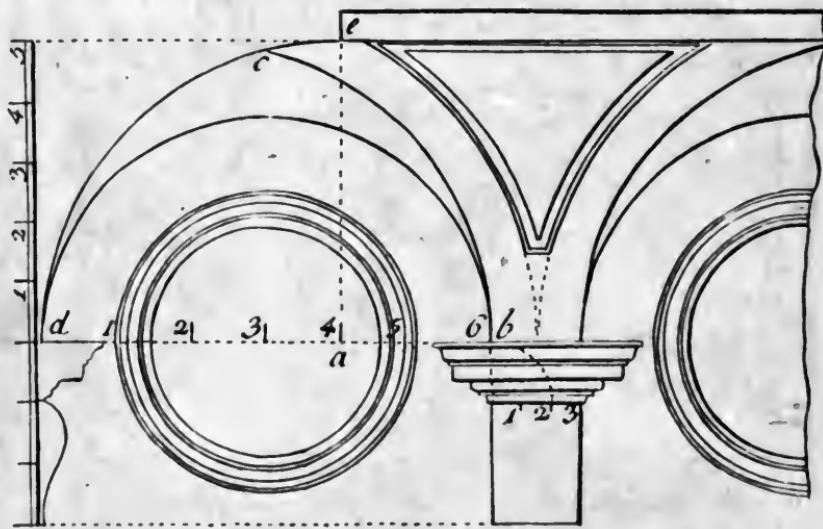
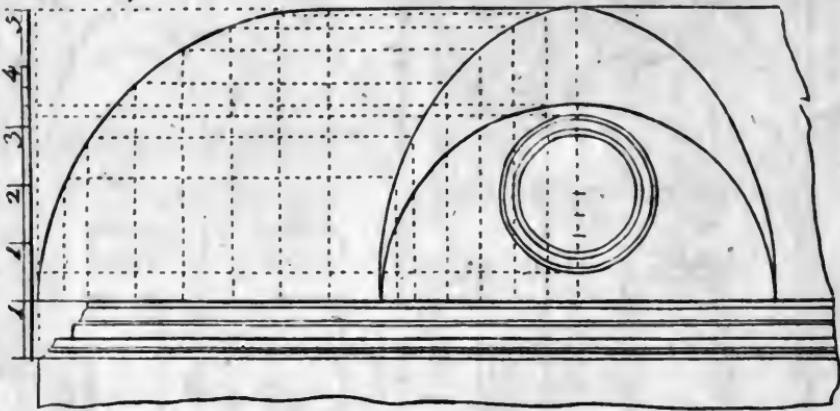
Dd



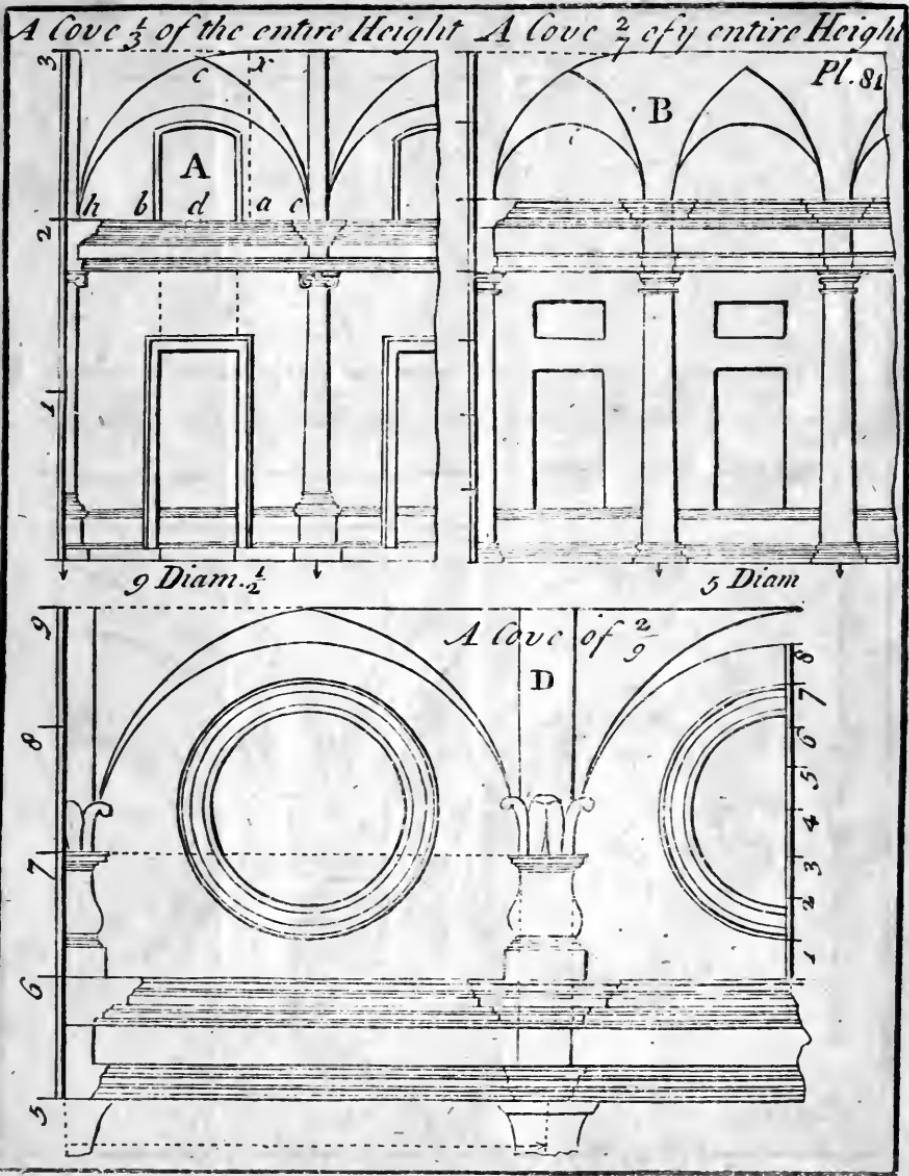


lives  $\frac{6}{5}$  of the entire Height

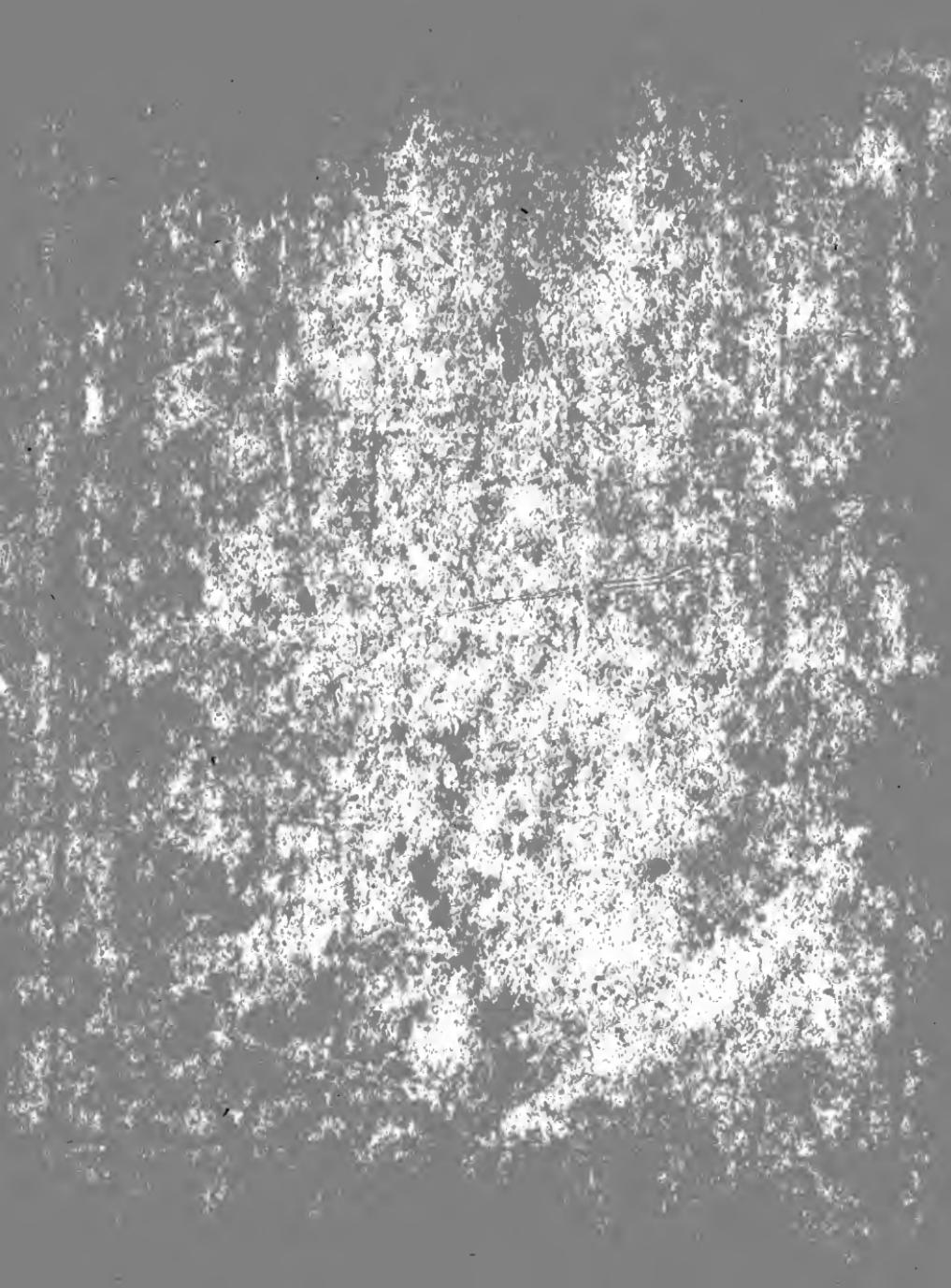
Pl. 20



BL Inv.

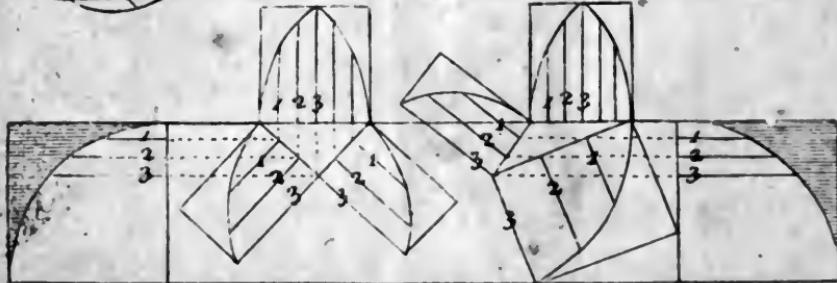
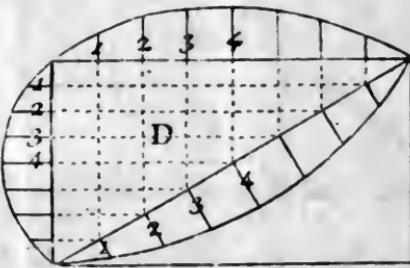
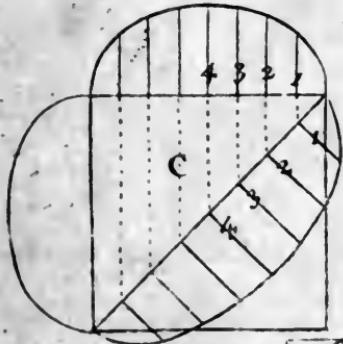
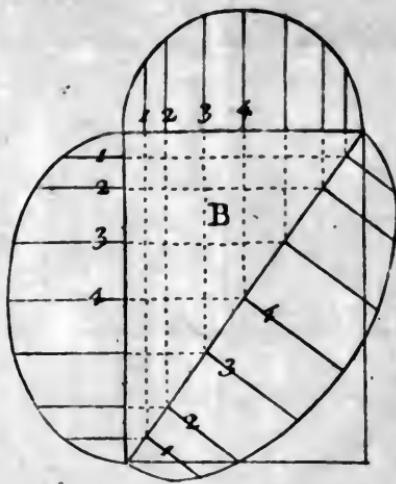
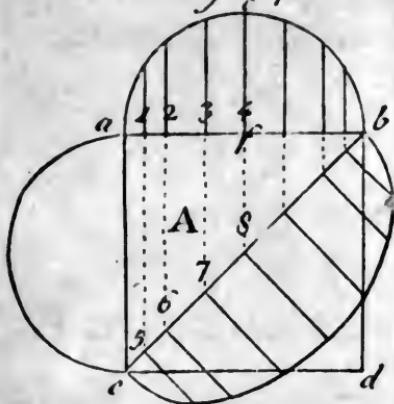






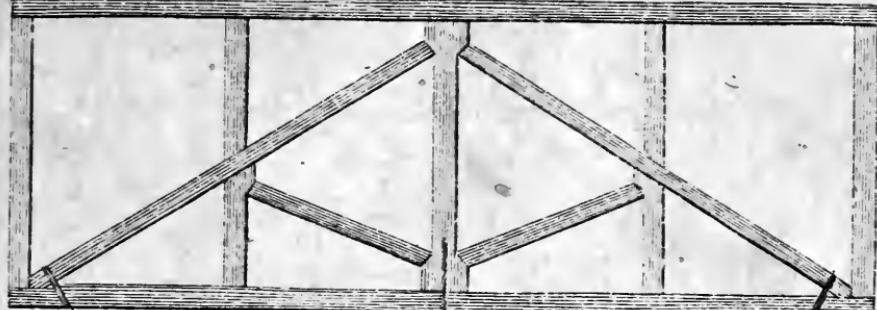
Centering for Groins

Pl. 82

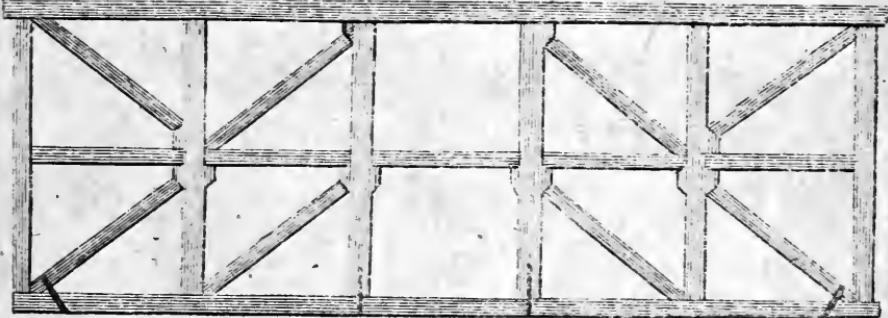


*Truss'd Partitions*

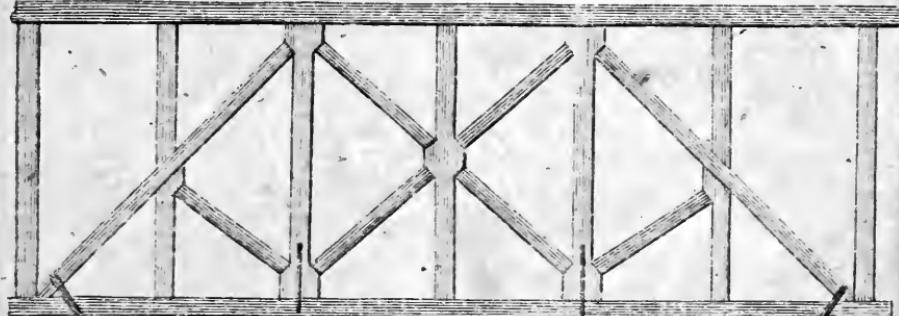
Pl 83



*Bearing 40 Feet in y Clear*



*50 Feet*

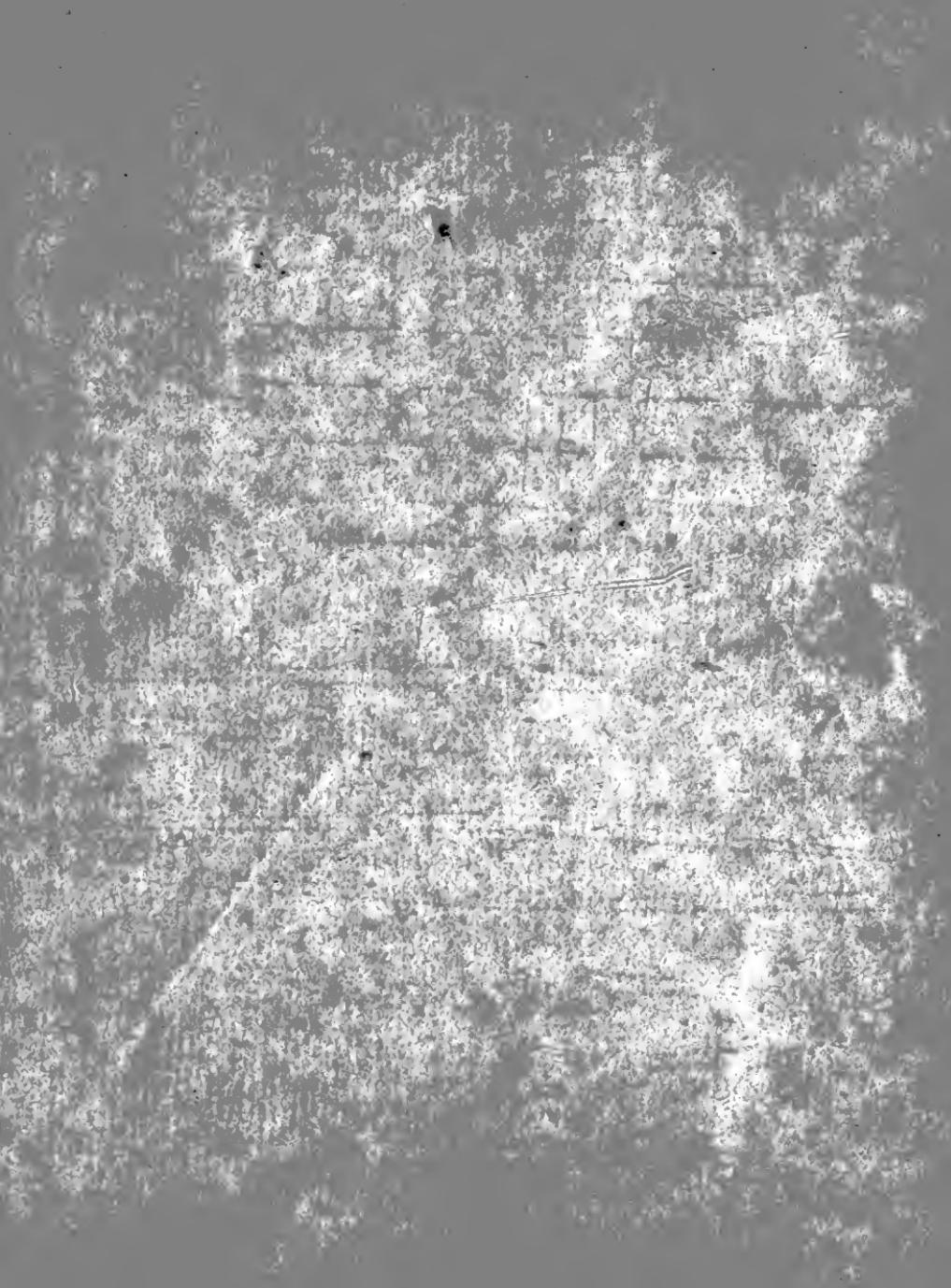


*B.L. Inv.*

*60 Feet*

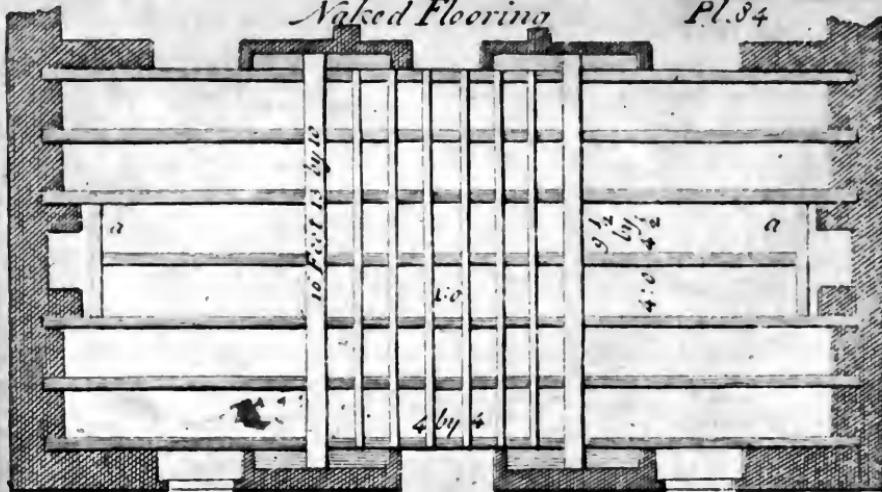
*Ee*





*Naked Flooring*

Pl. 84



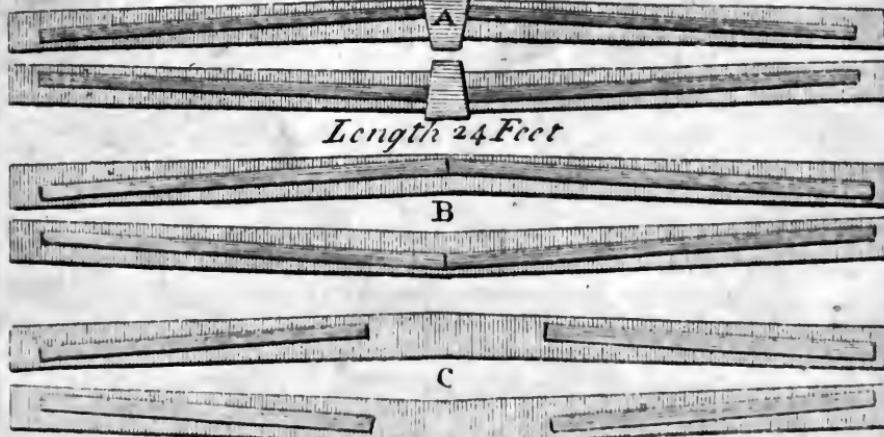
*Truss'd Girders*

A

B

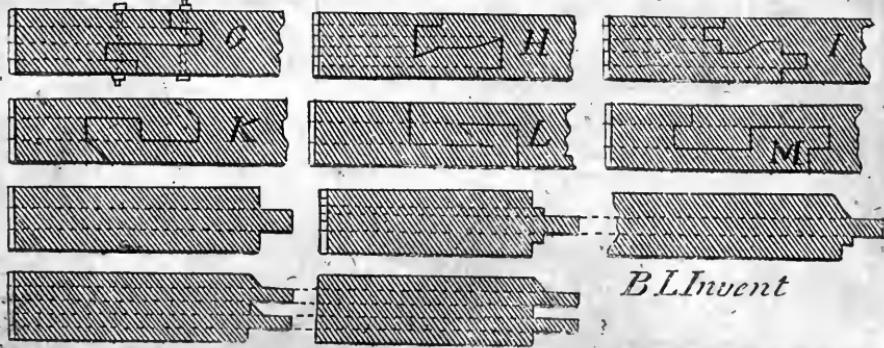
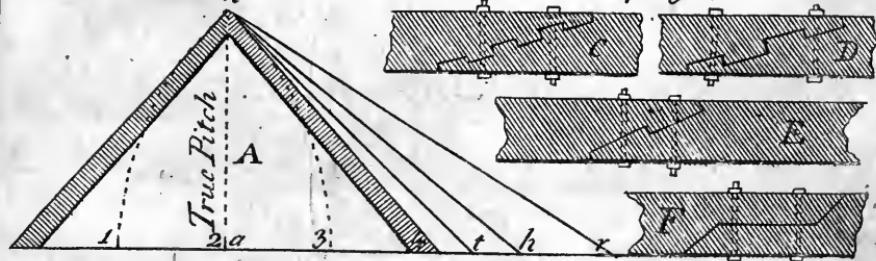
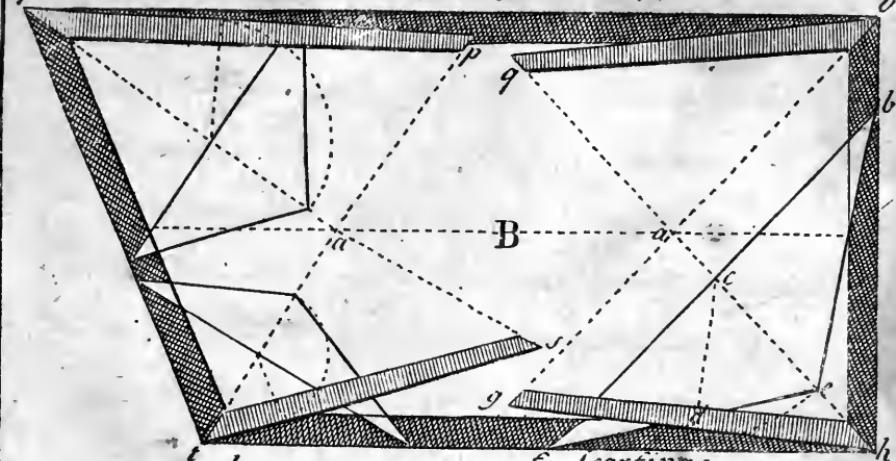
C

Length 24 Feet



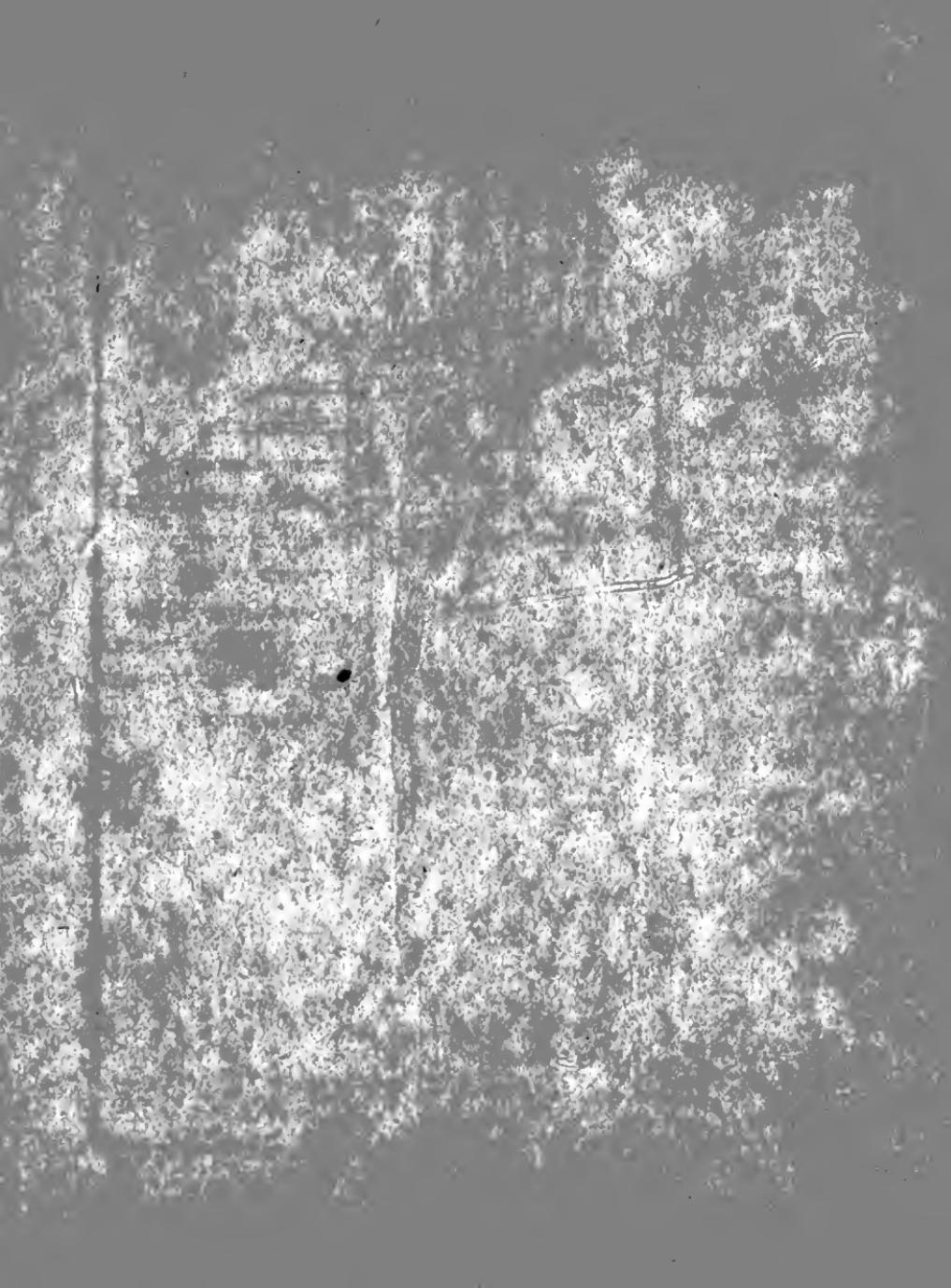
B. Langley Inv.

*The Lengths & Backs of Hip Rasters Explained Pl. 85*

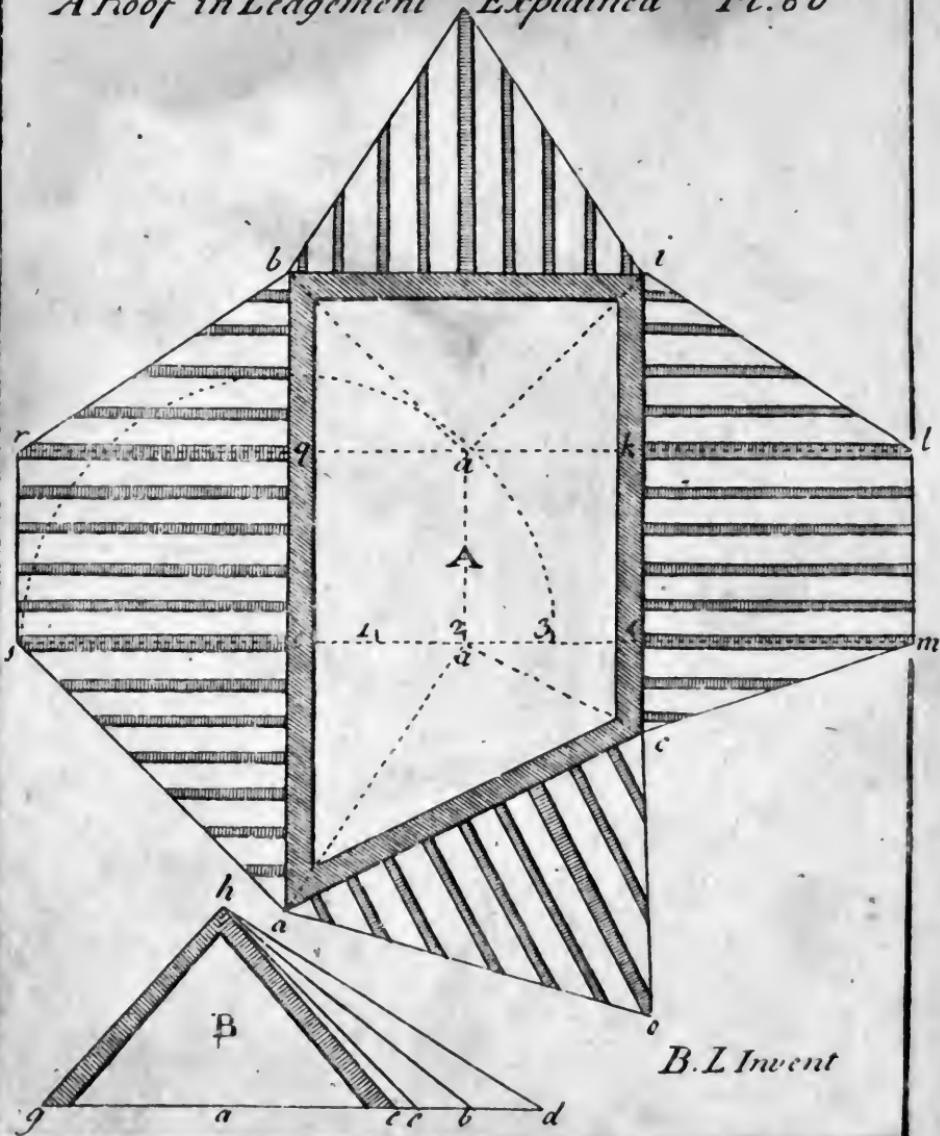


Ff



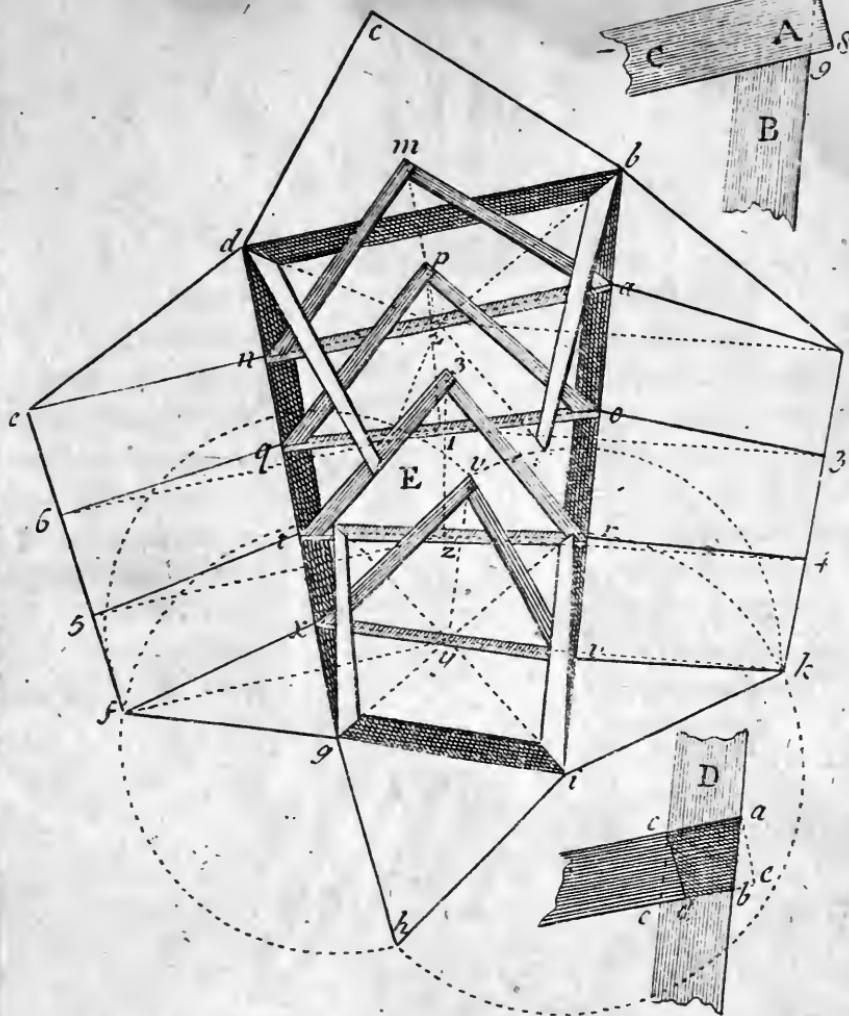


A Roof in Ledgement Explained Pl. 86



An Irregular Roof Explain'd

Pl 87

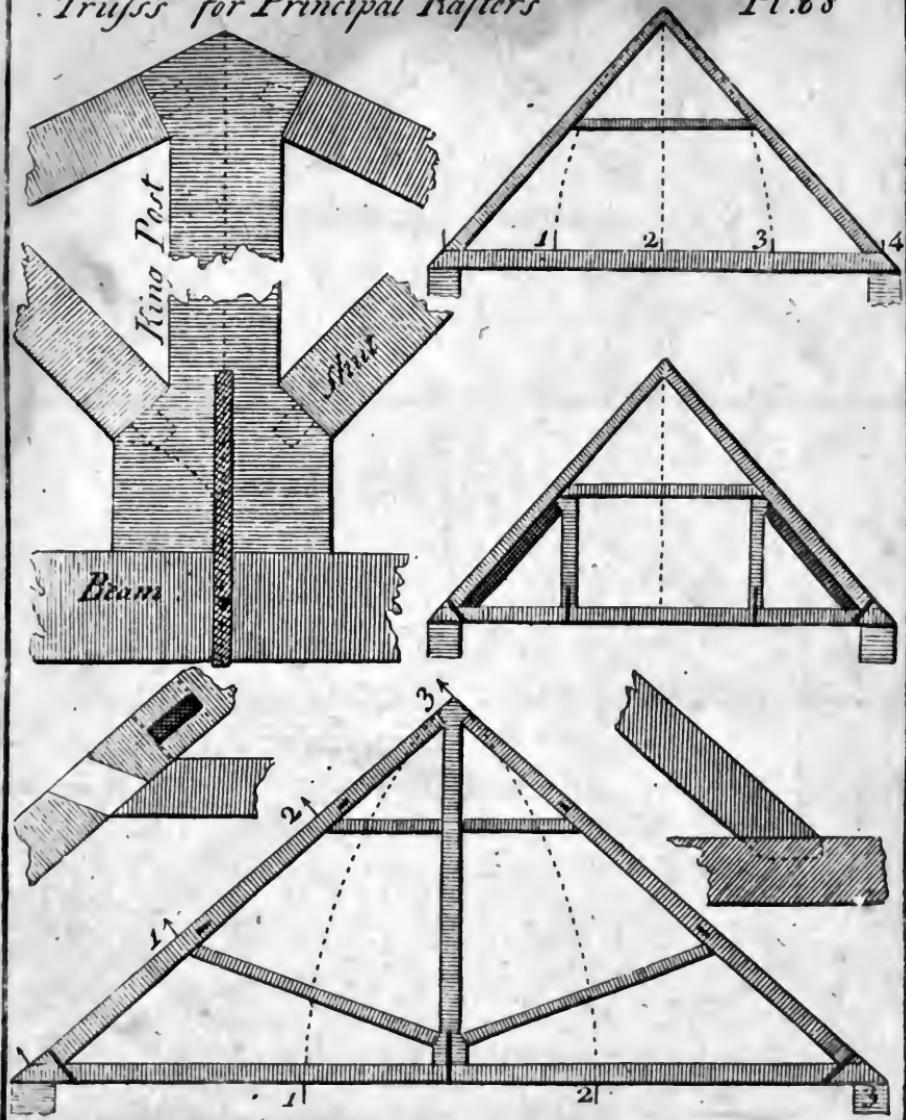


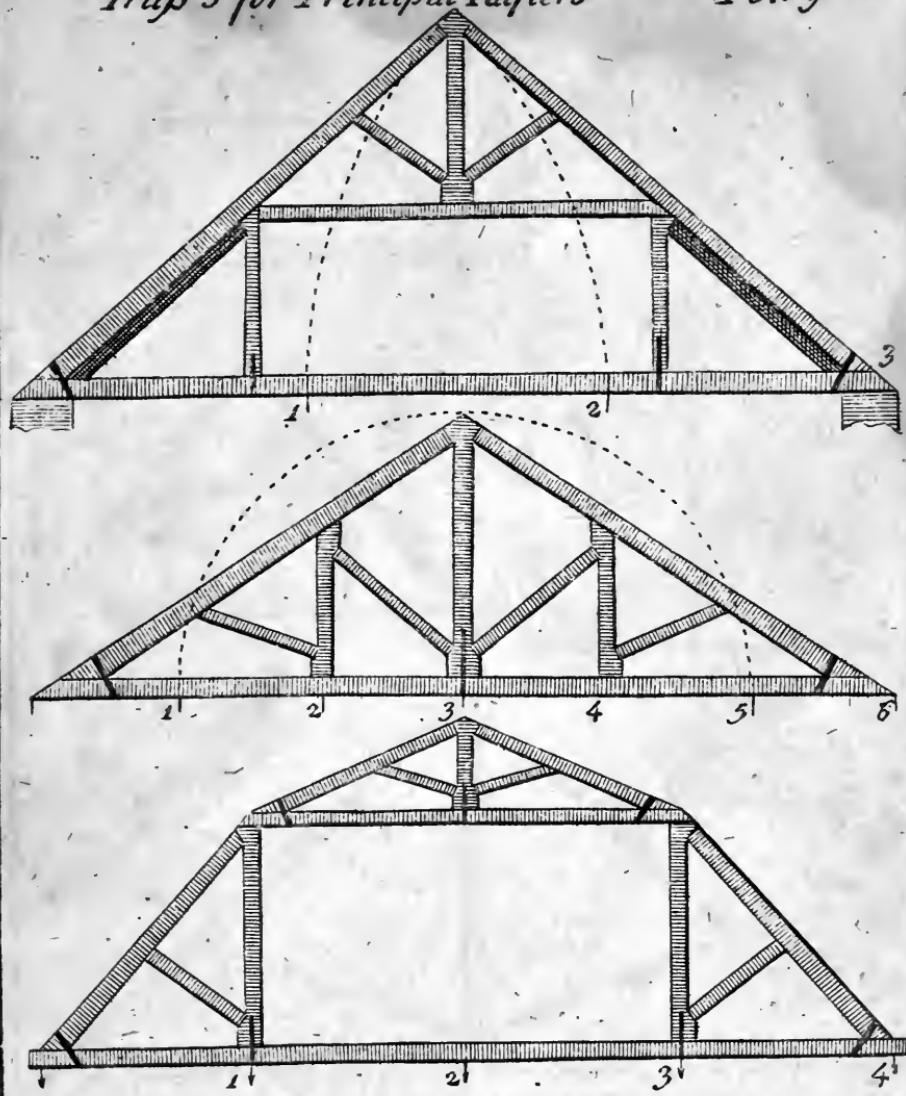




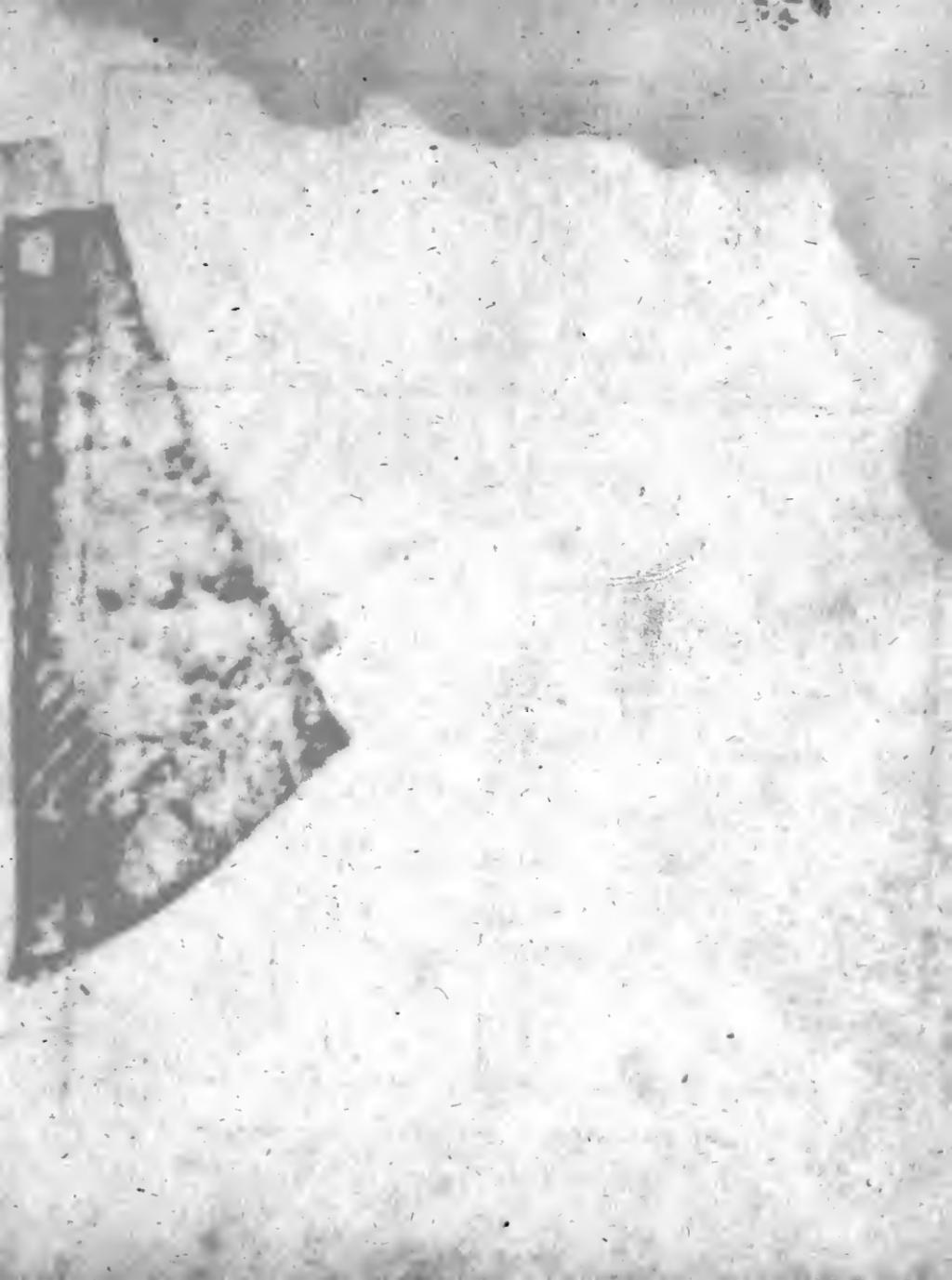
*Trusses for Principal Rafters*

Pl. 88



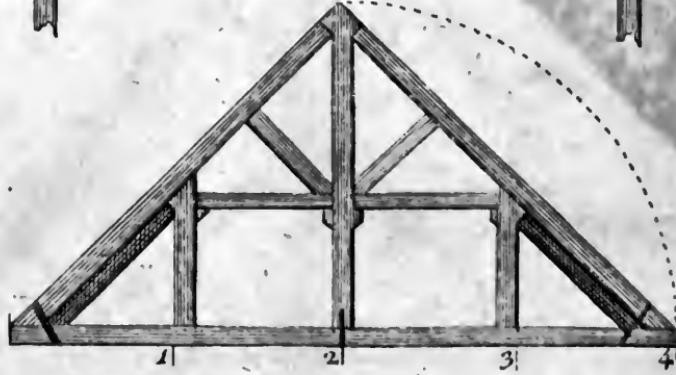
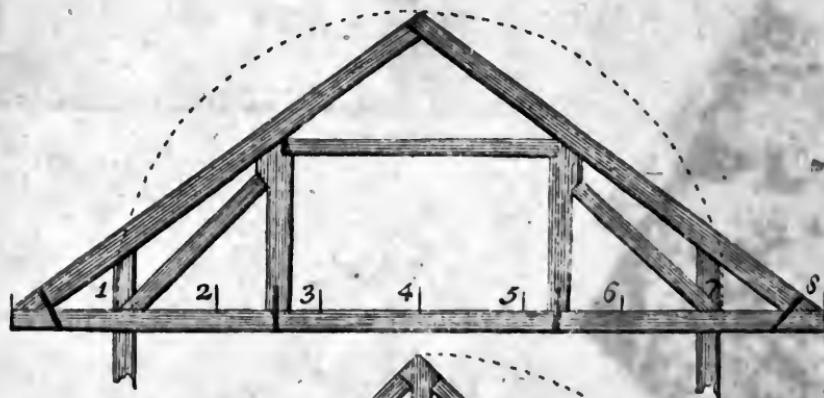
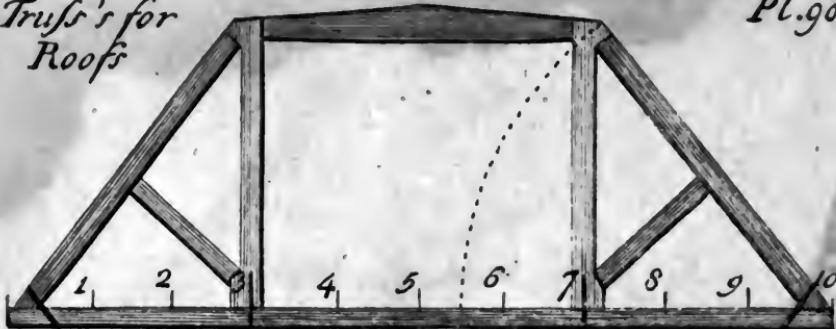






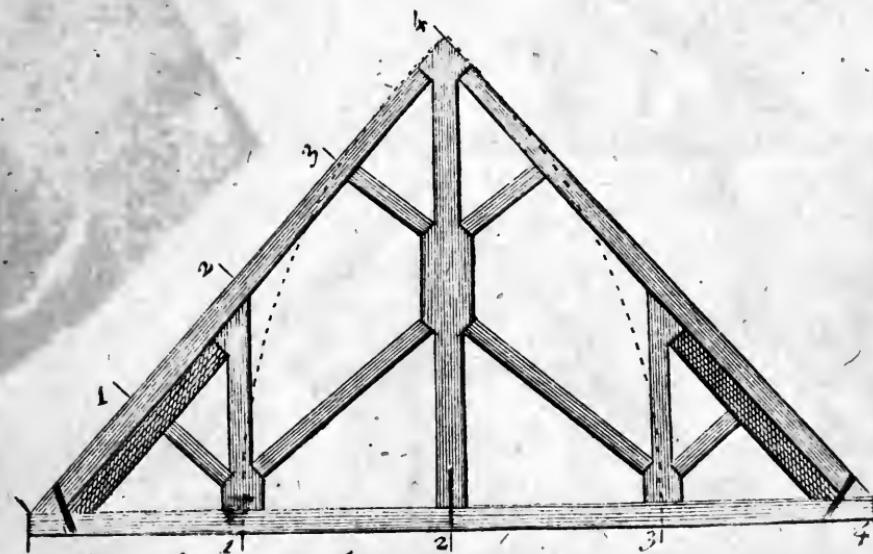
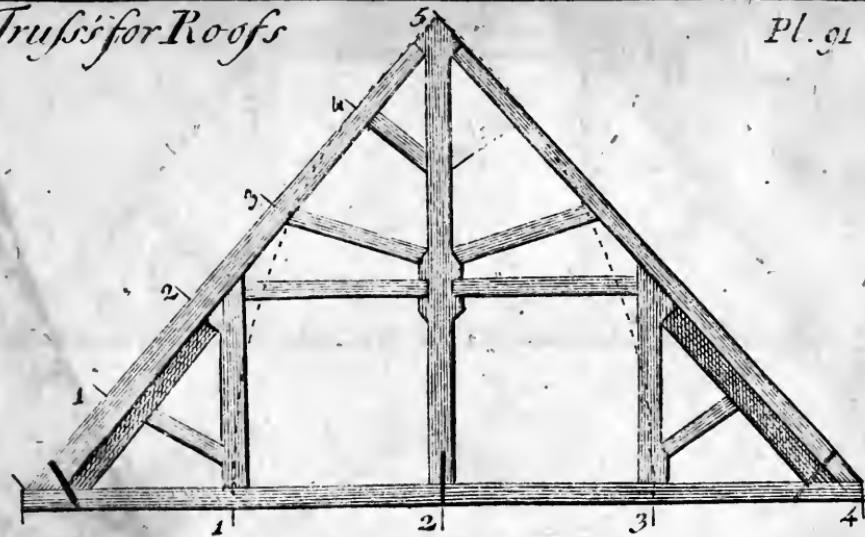
Truss's for  
Roofs

Pl. 90



Trusses for Roofs

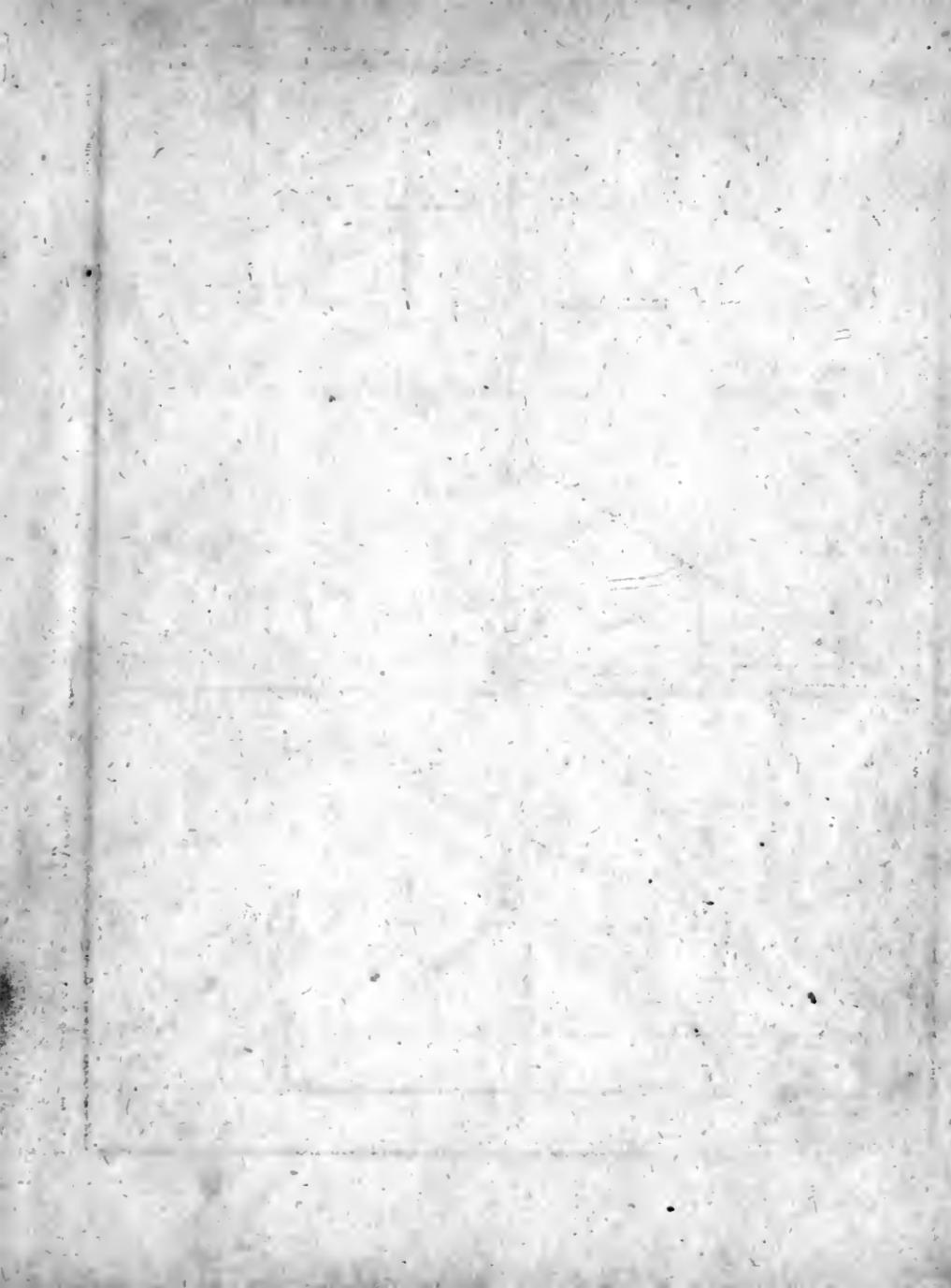
Pl. 91



B. Langley Invent

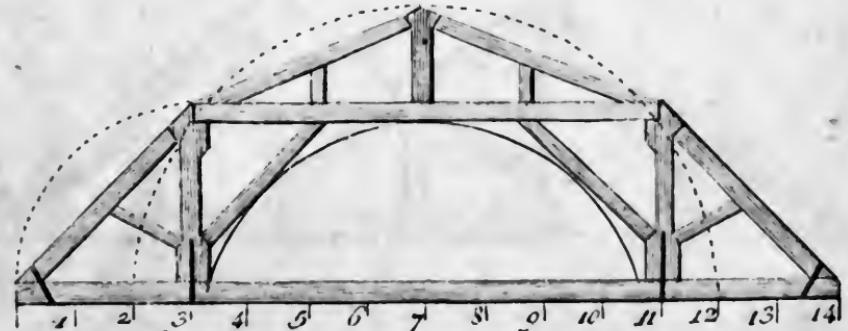
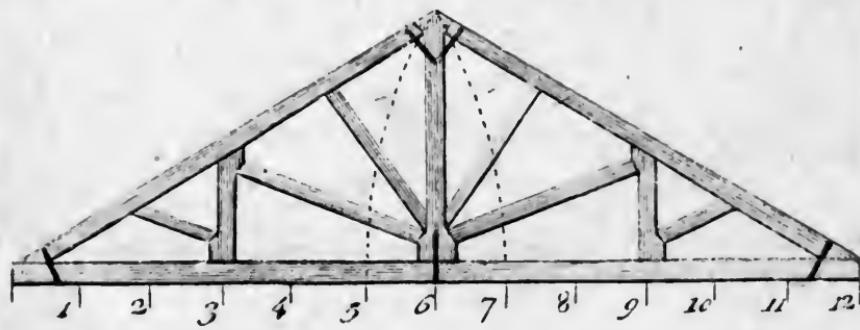
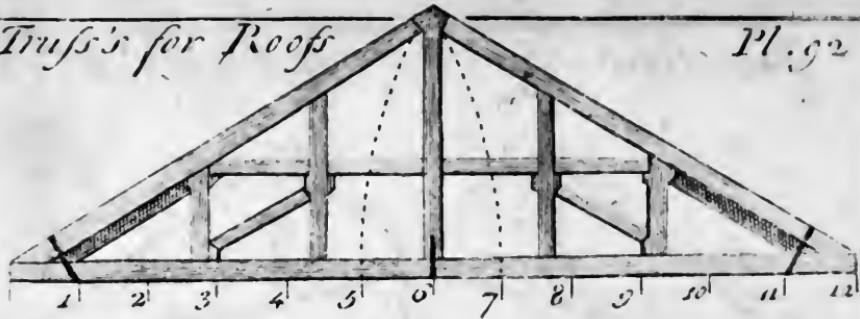
Hh





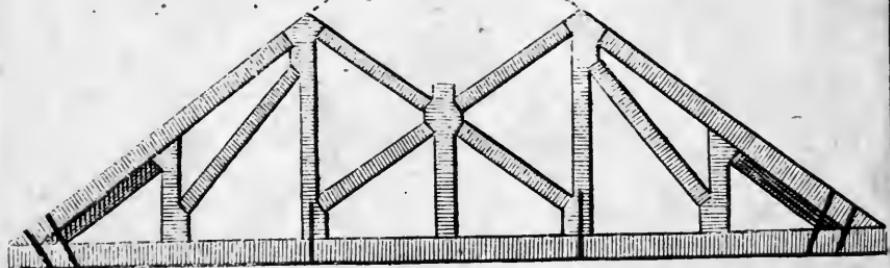
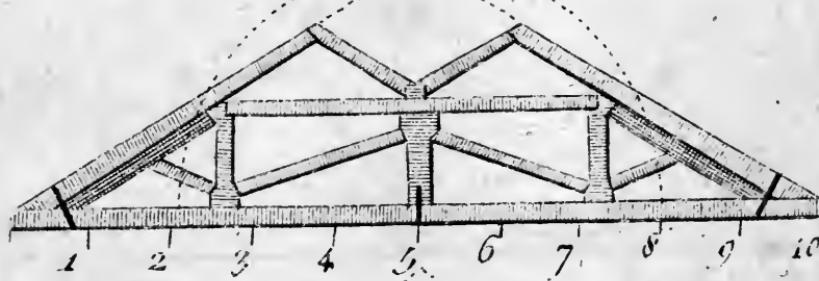
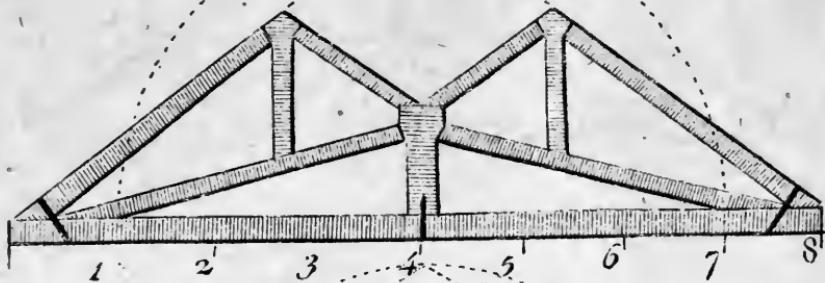
Truss's for Roofs

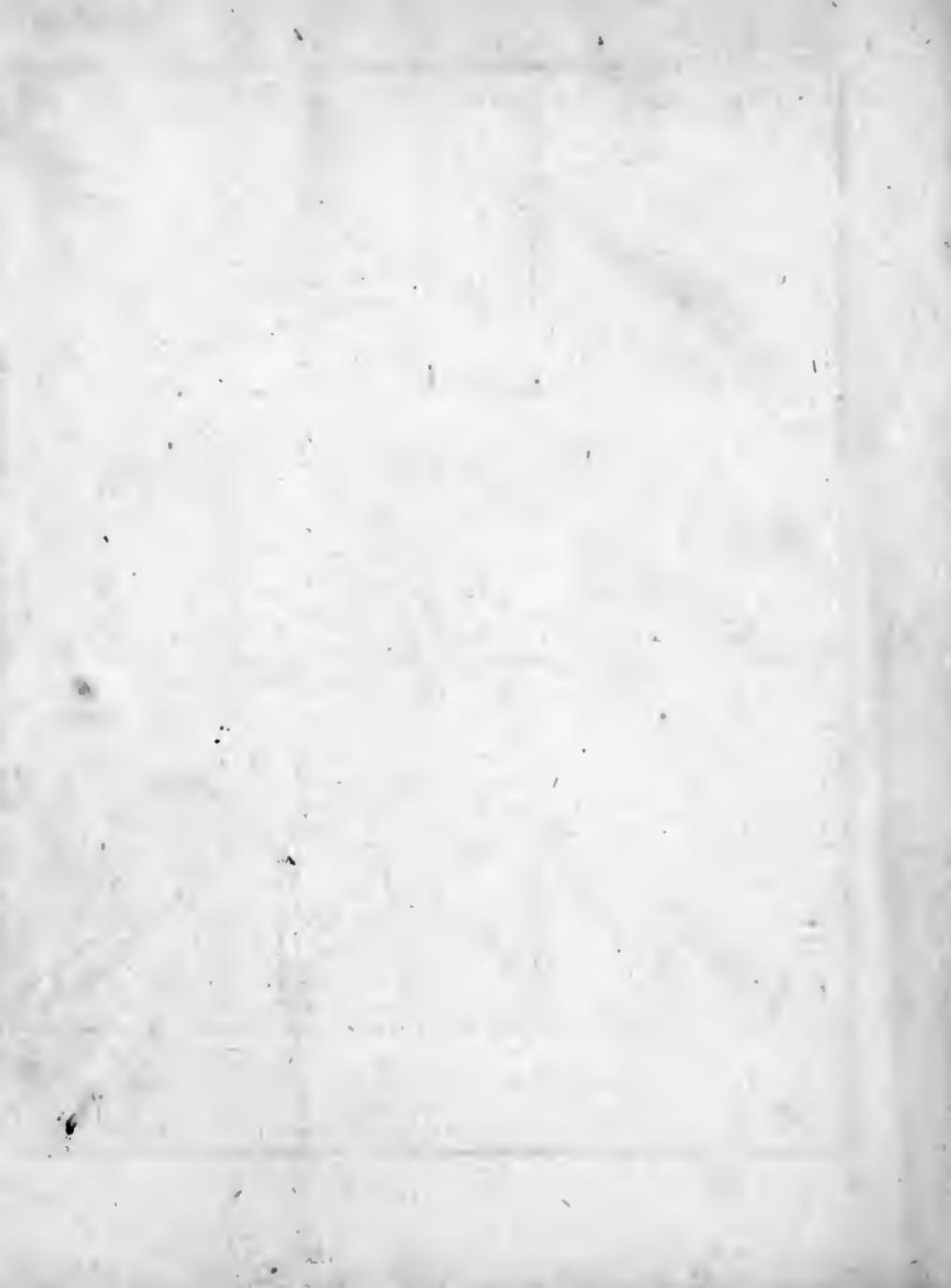
Pl. 92

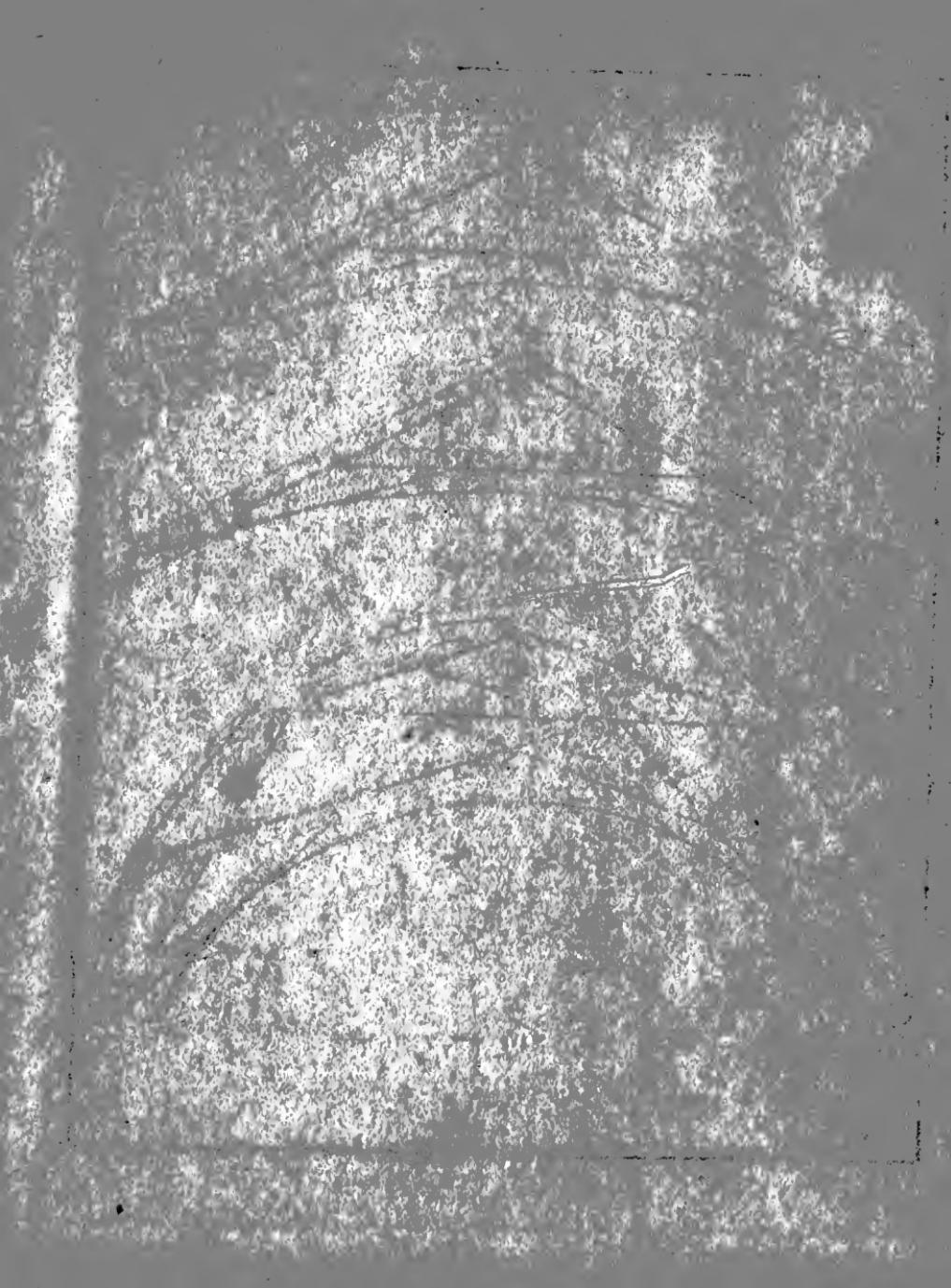


B Langley Invent

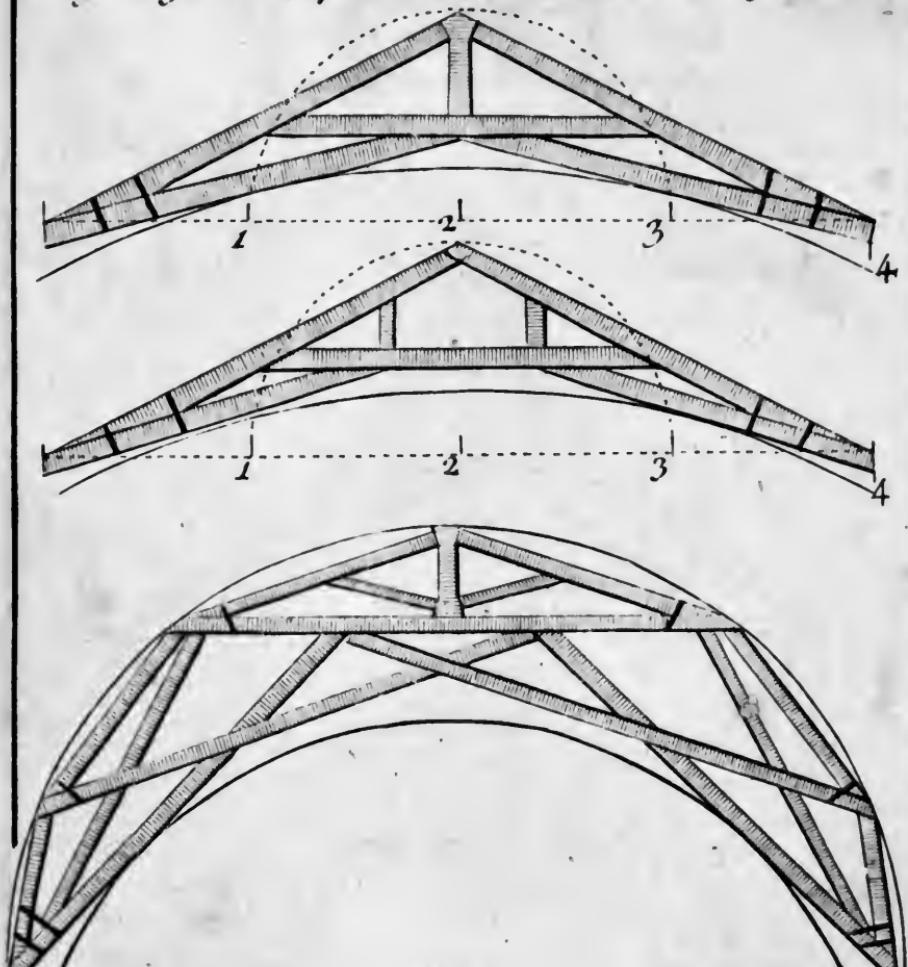
Three Trusses for  
M. Roofs Pl. 93





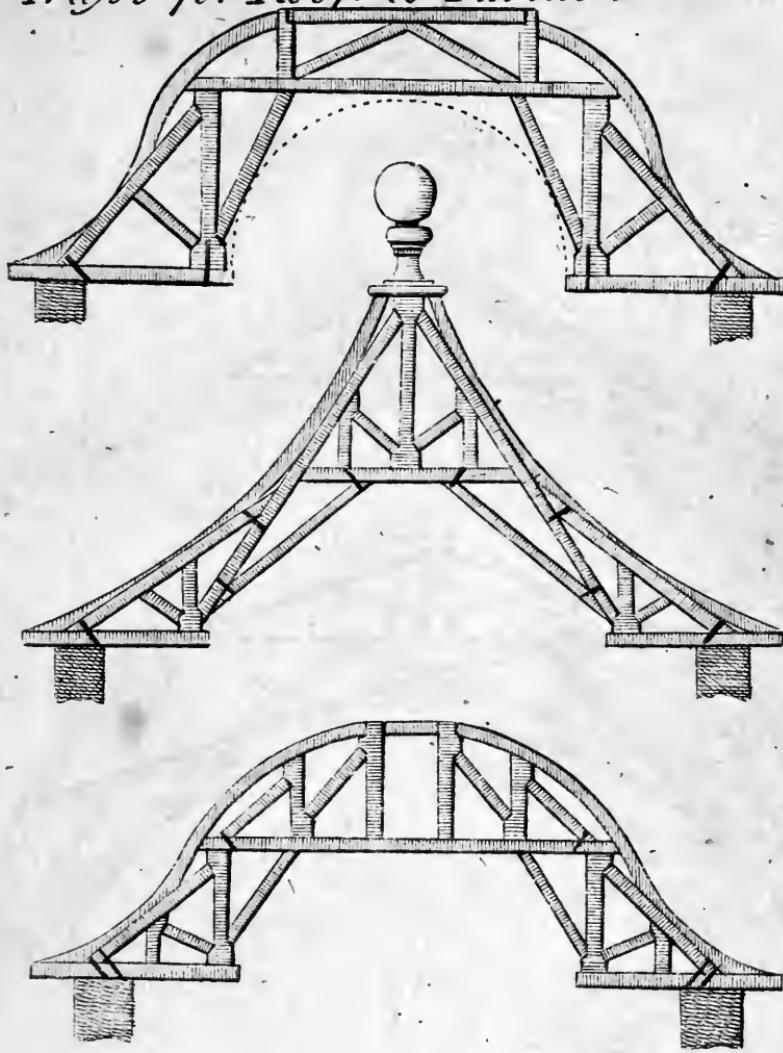


Truss's for Roofs over arch'd Ceilings Pl 94



*Trusses for Roofs to Pavilions*

Pl. 95

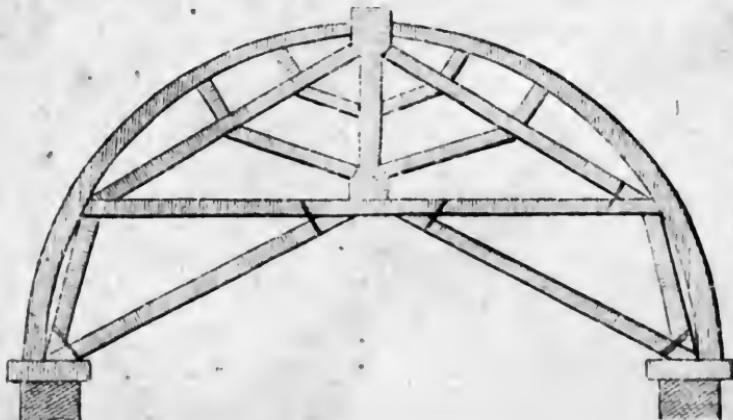
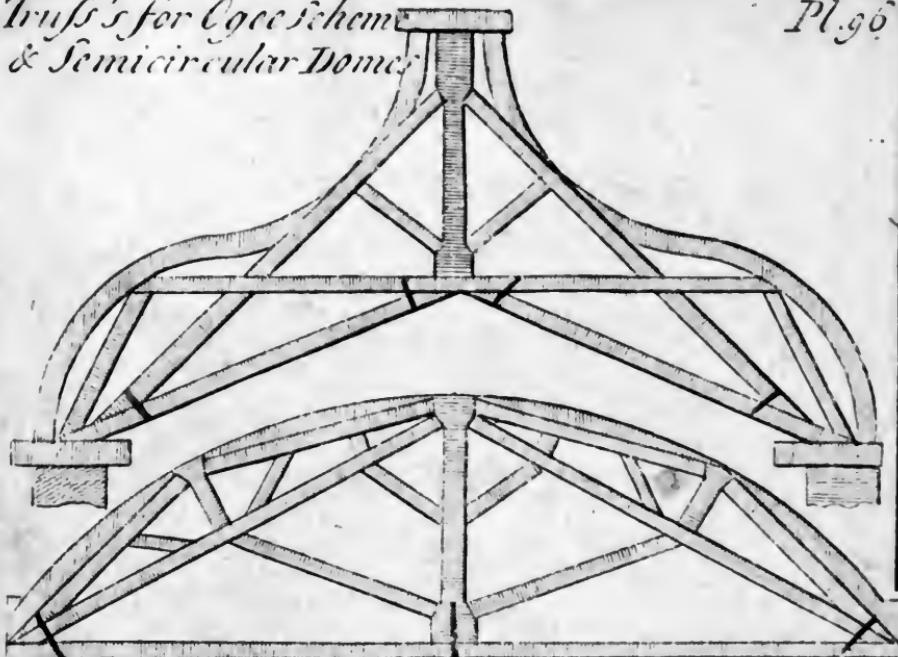






*Trusses for Geometric  
& Semicircular Domes*

Pl. 96



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